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OHIO STATE UNIVERSITY
BULLETIN

VOLUME XXXII

MARCH 24, 1928

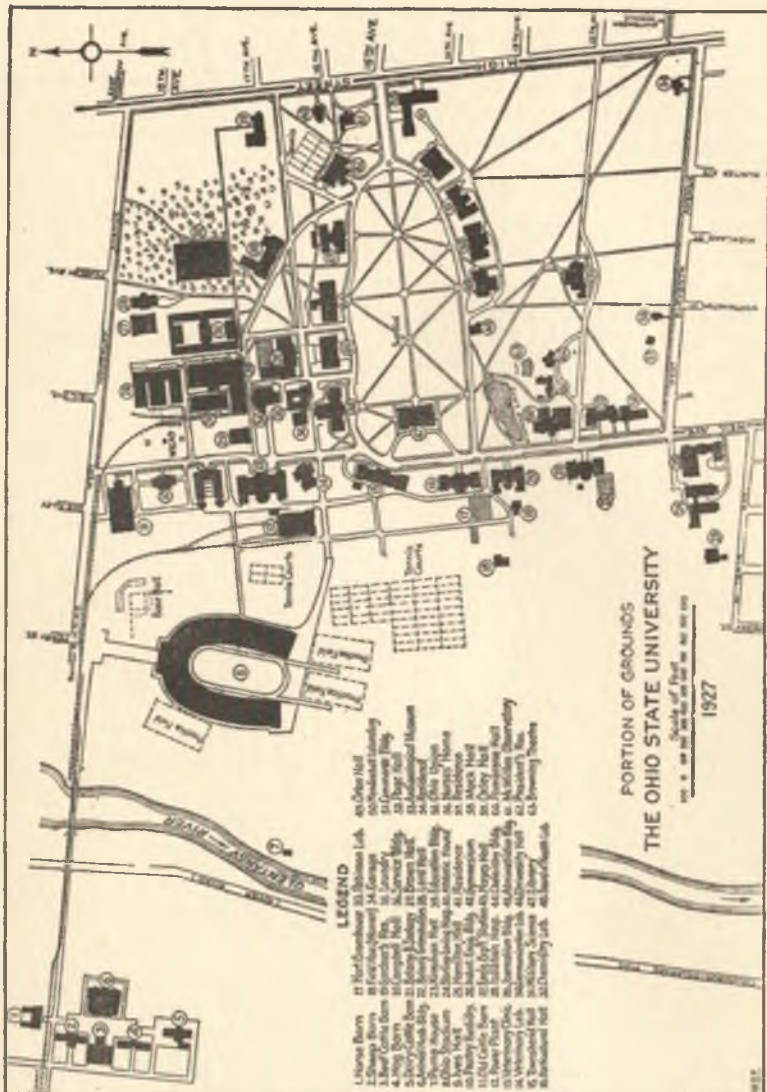
NUMBER 19

COLLEGE OF EDUCATION

1928-1929

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UNIVERSITY CALENDAR

1928

SUMMER QUARTER

June 4 to 8	Entrance Examinations.
June 15 to 20	Physical Examinations for all new students.
June 18	Latest day for registration and payment of fees without penalty. (See page 25).
June 19	Classes begin, 7:30 A. M.
June 23	Intelligence Test for all new students (Saturday P. M.)
July 4	Independence Day.
July 23, 24, 25	Final Examinations, first term (at regular class hours).
July 20, 21	Physical Examinations for all new students.
July 25	First Term ends, 5:30 P. M.
July 26	Second Term begins, 7:30 A. M.
July 28	Intelligence Test for all new students (Saturday P. M.)
August 29, 30, 31	Final Examinations, second term (at regular class hours).
August 31	Summer Convocation (Commencement), 2:00 P. M.
August 31	Summer Quarter ends, 6:00 P. M.

AUTUMN QUARTER

September 24 to 28	Entrance Examinations.
September 26 to October 1	Freshman Week.
October 1	Physical Examinations for students other than Freshmen.
October 1	Latest day for registration and payment of fees without penalty. (See page 25).
October 2	Classes begin, 8:00 A. M.
October 6	Intelligence Test for all new students other than Freshmen. (Saturday A. M.)
November 11	Armistice Day.
November 12	Armistice Day Ceremonies—No classes after 12 M.
November 29, 30, December 1	Thanksgiving Recess.
December 19, 20, 21, 22	Final Examinations.
December 21	Autumn Convocation (Commencement), 2:00 P. M.
December 22	Autumn Quarter ends, 6:00 P. M.

1929

WINTER QUARTER

January 2 to 5	Physical Examinations for all new students.
January 2	Latest day for registration and payment of fees without penalty. (See page 25).
January 3	Classes begin, 8:00 A. M.
January 5	Intelligence Test for all new students (Saturday A. M.)
February 22	University Day. No classes.
March 13, 14, 15, 16	Final Examinations.
March 15	Winter Convocation (Commencement), 2:00 P. M.
March 16	Winter Quarter ends, 6:00 P. M.

SPRING QUARTER

March 25 to 29	Physical Examinations for all new students.
March 25	Latest day for registration and payment of fees without penalty. (See page 25).
March 26	Classes begin, 8:00 A. M.
March 30	Intelligence Test for all new students (Saturday A. M.)
May 23	Competitive Drill, Cadet Regiments.
May 30	Memorial Day. No classes.
June 5, 6, 7, 8	Final Examinations.
June 8	Alumni Day.
June 9	Baccalaureate Sermon.
June 10	Class Day.
June 11	Spring Convocation (Commencement), 10:00 A. M.
June 11	Spring Quarter ends, 12:00 M.

ADMINISTRATION

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.....	EDITH D. COCKINS
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Residence: 1580 Guilford Rd., Upper Arlington—UN-9635	
University Examiner.....	BLAND L. STRADLEY
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Residence: Canal Winchester, No. 71	
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Residence: 265 Tulane Rd.—UN-2240-J	
Cashier.....	FLORIS D. HANE
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Residence: 373 Thirteenth Ave.—WA-1054	
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Office: Administration Building—UN-3148; Campus 283	
Residence: 1474 Doone Rd.—UN-1559-J	
Dean of Women.....	ESTHER ALLEN GAW
Office: Pomerene Hall—UN-3148; Campus 480	
Residence: 51 N. Monroe Ave.—FR-1894	
House Superintendent, Residence Halls.....	EMMA McKINLEY PROUT
Office: Oxley Hall—UN-3148; Campus 264	
Residence: Mack Hall—UN-3148; Campus 264, 348	

COLLEGE OF EDUCATION

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Office: Education Building—UN-3148; Campus 532
Residence: 216 East Lane Ave.—WA-1203

Secretary.....RAYMOND D. BENNETT
Office: Education Building—UN-3148; Campus 532
Residence: 68 North State St., Westerville—Westerville Ex. 155-W

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Office: Education Building—UN-3148; Campus 536
Residence: 195 West Eleventh Ave.—UN-9555

Division of Appointments

Director.....EARL W. ANDERSON
Office: Education Building—UN-3148; Campus 535
Residence: 93 East Frambes Ave.—WA-1014

FACULTY

1927-1928

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<i>Director of Bureau of Educational Research</i>	
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LYDIA CLARK BENEDICT, B.S.	<i>Professor of Physical Education</i>
BOYD H. BODE, Ph.D.	<i>Professor of Principles of Education</i>
CECIL E. BOORD, M.A., Ph.D.	<i>Professor of Chemistry</i>
ORVILLE G. BRIM, A.M., Ph.D.	<i>Professor of Principles of Education</i>
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<i>cational Research; Professor of Education</i>	
HAROLD E. BURTT, A.M., Ph.D.	<i>Professor of Psychology</i>
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M. BLAKEMORE EVANS, Ph.D.	<i>Professor of German</i>
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HENRY H. GODDARD, M.A., Ph.D.	<i>Professor of Psychology</i>
HARRY G. GOOD, Ph.D.	<i>Professor of History of Education</i>
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JAMES R. HOPKINS	<i>Professor of Fine Arts</i>

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ALBERT P. WEISS, A.M., Ph.D.	<i>Professor of Psychology</i>
JOHN W. WILCE, B.A., M.D.	<i>Professor of Physical Education</i>
CARL WITTKE, A.M., Ph.D.	<i>Professor of History</i>
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THOMAS C. HOLY, M.A., Ph.D.,	<i>Associate Professor of Education and</i> <i>Research Associate of Bureau of Educational Research</i>
JOSEPH A. LEEDER, B.Sc.	<i>Associate Professor of Music</i>
M. EMETT WILSON, A.M.	<i>Associate Professor of Music</i>
ROSCOE H. ECKELBERRY, M.A., Ph.D.,	<i>Assistant Professor of History of</i> <i>Education</i>
ARCH O. HECK, M.Sc., Ph.D.,	<i>Assistant Professor of School Administration</i>
KATHARINE F. HERSEY, B.S., M.A.,	<i>Assistant Professor of Physical</i> <i>Education</i>
M. EDITH JONES, B. Mus.	<i>Assistant Professor of Music</i>
FREDERICK C. LANDSITTEL, M.S.Ed., Ph.D.,	<i>Assistant Professor of</i> <i>Principles of Education</i>
GLADYS E. PALMER, B.A.	<i>Assistant Professor of Physical Education</i>
WARD G. REEDER, A.M., Ph.D.,	<i>Assistant Professor of School Administration</i>
SAMUEL RENSHAW, M.A., Ph.D.	<i>Assistant Professor of Psychology</i>
ALICE ROBINSON, B.S.	<i>Assistant Professor of Fine Arts</i>
A. SOPHIE ROGERS, M.A., Ph.D.	<i>Assistant Professor of Psychology</i>

- ROBERT E. SMITH, M.A. *Assistant Professor of Industrial Education*
WILLIAM E. WARNER, M.S., *Assistant Professor of Industrial Education*
EARL W. WILEY, M.A. *Assistant Professor of English*
ROBERT D. WILLIAMS, A.M., Ph.D. *Assistant Professor of Psychology*
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ERWIN F. FREY *Instructor in Fine Arts*
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NOTLEY S. MADDOX, B.Sc. in Edu., M.A., *Instructor in Principles of Education*
LUELLA C. PRESSEY, A.M., Ph.D. *Instructor in Psychology*

THE OHIO STATE UNIVERSITY

The Ohio State University is situated within the corporate limits of the City of Columbus. It is supported by appropriations from the State and Federal governments. The campus and farm cover 1,118 acres. The campus proper contains 300 acres. The total value of land, buildings, and equipment is \$14,933,994.00.

ORGANIZATION

For convenience of administration the departments of the University are grouped into organizations called Colleges. The Ohio State University comprises ten Colleges and a Graduate School, each under the administration of a Dean and College Faculty, as follows:

Graduate School	College of Dentistry
College of Agriculture	College of Education
College of Liberal Arts	College of Engineering
College of Commerce and	College of Law
Administration, including	College of Medicine
the Schools of Journalism	College of Pharmacy
and Social Administration	College of Veterinary Medicine

THE UNIVERSITY YEAR—FOUR QUARTERS

The University year is divided into four Quarters, each approximately eleven weeks in length. The Summer Quarter is further divided into two terms of approximately six weeks each. Complete courses that are so announced may be taken for either term or for the entire Quarter.

Nearly all of the elementary courses are five hours each week. A number of more advanced courses are two or three hours each week. The schedule is so arranged that a student who is registered in a College where the work is largely elective, may enter at the beginning of any Quarter and may, without hardship, be absent during any Quarter. For the most part students will take one Quarter each year as a vacation period—usually the Summer Quarter. By attendance in all four Quarters the duration of the time of residence for a degree may be shortened. Many persons, particularly teachers, avail themselves of the advantages offered in the Summer Quarter.

This *Bulletin* is devoted to the work of the College of Education for the Autumn, Winter, and Spring Quarters, 1928-1929. The announcements for the Summer Quarter are printed in the Summer Quarter Bulletin.

NOTE: Bulletins describing the work of the several Colleges may be obtained by addressing the University Examiner, Ohio State University, Columbus, and stating the College in which the writer is interested. (For list of bulletins, see cover page 3.)

SUMMER QUARTER

Courses offered by the professional departments of the College of Education during the Summer Quarter comprise nearly all the courses offered during the rest of the year and, in addition, a number of special Summer Quarter courses. Practically the entire staff of the professional departments offers instruction during the Summer Quarter. This regular staff is increased by a considerable number of visiting professors from other colleges and universities.

The Summer Quarter is divided into two terms of equal length. A student may register for either term or for the entire Quarter.

Students desiring information regarding the Summer Quarter should write for the Summer Quarter Bulletin.

COLLEGE OF EDUCATION

GENERAL INFORMATION

The office of the College of Education is located in the Education Building, on the northeast corner of the University Campus, at the Seventeenth Avenue and High Street entrance. The office is open from 8 a. m. to 12 m. and 1 to 5 p. m. except Saturday. On Saturday, the office hours are from 8 a. m. to 12 m.

The offices of the President of the University, the University Examiner, the Registrar, and the Bursar are located in the Administration Building.

SCOPE OF WORK OFFERED

This College was established by the University for the professional training of teachers, as provided in the school laws of this State, and is the teacher training agency within the University. It offers practical and theoretical courses for the training of high school and elementary school teachers and principals, of supervisors and teachers of special studies—music, physical education, fine arts, home economics, industrial arts, commercial subjects, etc., of school psychologists, of school nurses and teachers in schools of nursing, of superintendents of school systems, of county and district superintendents, and of instructors in normal schools. Its purpose is to assist the student in the acquirement of a knowledge of the branches which he wishes to teach, to develop a professional attitude toward education, and to develop skill in the use of efficient methods of teaching and of supervision.

The effort of the College is to bring into proper adjustment within the limits of a four-year course the academic training, the theoretical professional training, and the practical professional training necessary for effective teaching. The completion of the requirements in this College leads to the degree, Bachelor of Science in Education.

DEPARTMENTS

The College of Education includes work in the following departments offering general and professional training for teachers: Psychology, History of Education, School Administration, Principles and Practice of Education, Fine Arts, Music, Industrial Arts Education, Bureau of Educational Research, Vocational Education, Home Economics, Accounting, Agricultural Chemistry, Agricultural Engineering, Anatomy, Architecture, Astronomy, Bacteriology, Bibliography, Botany, Business Organization, Ceramic Engineering, Chemical Engineering, Chemistry, Civil Engineering, Classical Languages, Economics, Engineering Drawing, English, Geography, Geology, German, History, Horticulture, Industrial Engineering, Journalism, Mathematics, Military Science and Tactics, Philosophy, Physical Education, Physics, Physiology, Political Science, Public Health, Romance Languages and Literatures, Rural Economics, Sociology, Zoology and Entomology.

THE BUREAU OF EDUCATIONAL RESEARCH

In recognition of the need for research work in the field of education, and in order to serve the public schools of the State whose research problems are especially numerous, the Bureau of Educational Research has been created in the College of Education. Under certain restrictions students enrolled in the various departments of the College of Education may work in the Bureau. Graduate students will find the facilities of the Bureau of great assistance. The Bureau maintains a service department and a textbook library. For further description of the Bureau see Departments of Instruction.

GRADUATE WORK

Students desiring to do graduate work in any of the departments of the College of Education will register in the Graduate School. Graduate courses leading to the degrees of M.A. and Ph.D. are offered by all the professional departments of the College of Education, comprising History of Education, Industrial Arts Education, Principles and Practice of Education (including Secondary, Elementary, and Rural Education), Psychology, School Administration, and Vocational Education. Graduate work is also offered by the Department of Fine Arts. For information regarding fees, registration, graduate degrees, etc., consult the Bulletin of the Graduate School.

All graduate students registered in "600" courses are required to complete a certain amount of work in addition to that required of undergraduates. This may consist of reading additional books on the subject, the presentation of reports, or of such other work as the instructor in charge of the course may deem wise.

GRADUATE CREDIT FOR SENIORS

A Senior whose full time is not required for the completion of the work for his baccalaureate degree may select certain courses for grad-

uate credit, *but to do this the permission of the Graduate Council (Room 106, University Hall) must be obtained before registering for the courses.*

RESIDENCE REQUIREMENT

A candidate for a degree must secure credit by regular class enrollment for the full work of three Quarters. This work must be in courses offered by the College recommending the degree, and must be secured while in residence at this University. During the last two Quarters of his residence the candidate must be enrolled in the College recommending the degree.

REGISTRATION OF CANDIDACY FOR DEGREE

Immediately prior to the beginning of his Senior year every student is expected to register candidacy for his degree. To comply with this rule, a student should go to the College of Education Office, and fill out certain blank forms which will be furnished him. His candidacy will then be entered upon the records of the College and, if he requests it, he will be given a statement showing his standing with respect to credit hours and credit points, academic and professional subjects, major and minor, and all other requirements for the degree, Bachelor of Science in Education.

Students expecting to obtain degrees in June, 1929, are advised to go to the College office during the Spring Quarter 1927-1928 and register their candidacy. Students expecting to be candidates for degrees at the end of the Summer, Autumn, or Winter Quarters, should register their candidacy three Quarters prior to the expected time of graduation. Then as soon as their grades for the current Quarter are recorded, statements, if requested, will be prepared and mailed to them. Students who are in doubt regarding their requirements are advised to secure such statements before registering for any of the work of the Senior year.

FINAL APPLICATION FOR DEGREE

In accordance with the rules and regulations of the University, a candidate for a degree must file a final application for his degree with the Secretary of the College at least two weeks prior to the opening of the Quarter that is to complete his course.

PROFESSIONAL SUBJECTS

Pursuant to the present School Code of Ohio the State Director of Education has designated the subjects which are accepted and treated as professional subjects in the training of teachers and which are required of all applicants for state provisional certificates.

The subjects are General Psychology, Educational Psychology, History of Education, Principles of Education, School Administration, Special Methods and Supervised Observation of Teaching and Supervised Teaching.

TEACHERS' CERTIFICATES

All graduates of the College of Education are entitled, under the law, to a state provisional high school or elementary school teacher's certificate, without examination. This certificate, obtainable from the State Director of Education on the payment of a fee of one dollar, is valid in the State of Ohio for four years and the holder is eligible for appointment as teacher in any high school in the State, without further examination.

Graduates from this College in Home Economics, in Commercial Teacher Training, in Industrial Arts Education, in Fine Arts, in Music, in Vocational Education, and in Physical Education are also entitled, without further examination, to a state provisional special certificate valid for four years, in the appropriate one of the above lines. The holder of such special certificate is eligible for appointment as teacher or supervisor in the particular subject covered by the certificate.

The holder of any of these provisional certificates, furnishing evidence that he has completed at least twenty-four months of successful teaching during the four years, will be granted a state life certificate, of corresponding character, by the State Board of School Examiners.

Applications for these certificates may be obtained at the office of the Secretary of the College of Education. All applications for these certificates must be filed with the Secretary not later than two months previous to the time at which the degree is expected.

TEACHERS' PLACEMENT SERVICE

The Ohio State University maintains a Teachers' Placement Service for the convenience of the Superintendents and Boards of Education of the State. Graduates and graduate students of the Ohio State University are invited to enroll with the Appointment Office.

The Placement Service is under the direction of the Bureau of Educational Research. This service is rendered free of charge to the applicants. Graduates of experience who desire to better their locations are invited to communicate with the Appointment Office.

The Appointment Office has available such statistical information that advice and direction may be given in the matter of supply and demand for teachers in their various fields.

The service offered will be rendered on the exact basis of merit.

Superintendents and Boards of Education are invited to state their needs to the Appointment Office. Prompt attention to all calls is assured.

RESERVE OFFICERS' TRAINING CORPS

Under the law of Congress establishing the land grant colleges, it is required that instruction in Military Science and Tactics be included in the curricula. This instruction is given under the National Defense Act of June 3, 1916, as amended, establishing in the University the Reserve Officers' Training Corps. Twenty-two commissioned officers

and twenty-five enlisted men of the Regular Army are detailed by the War Department to take charge of this department. The Board of Trustees has directed that all male students, special and regular, except those registered in the Colleges of Dentistry, Law, and Medicine, and in the curriculum in Applied Optics, shall complete the two years of military requirement unless especially excused by the Department of Military Science and Tactics.

A student who has passed his twenty-fifth birthday before entering the University, or who will pass his twenty-fifth birthday on or before Commencement Day of the Spring Quarter following his matriculation in the University, may be excused from the Military Science requirement.

Self-support is not an adequate reason for excusing a student from the requirement in Military Science.

The Reserve Officers' Training Corps is organized as a Reinforced Brigade consisting of two regiments of Infantry, each composed of three battalions of four companies each; two regiments of Field Artillery, each composed of two battalions of three batteries each; one battalion of Signal Corps, composed of two companies; and a Band of one hundred pieces. There is also a Medical Unit, a Dental Unit, and a Veterinary Unit. The total number of men in all units averages about three thousand five hundred.

The course of instruction is both practical and theoretical, and divided into basic (first and second year) and advanced (third and fourth year) courses in Infantry, Field Artillery, Signal, Medical, Dental, and Veterinary Corps. One-half of the time is devoted to theoretical work in the classroom and one-half of the time to practical work in the field. The basic courses are required of all Freshmen and Sophomores. The advanced courses are elective for Juniors and Seniors. Students completing the advanced course, when recommended by the Commandant and the President of the University, are granted commission as Second Lieutenant in the Officers' Reserve Corps by appointment from the President of the United States. No student is eligible for the advanced course until he has completed satisfactorily the basic course or its equivalent.

This University has adopted its own style of uniform. Students taking advanced courses in Military Science and Tactics receive commutation of rations which this year has amounted to thirty cents a day, payable quarterly.

The appointment of cadet officers is made usually from those who have served in the Military Department at least two years and as a reward for excellence in their work.

Service in the Band is credited as fulfilling the military requirement, the positions being assigned after competitive try-out.

CREDIT FOR WORK IN RESERVE OFFICERS' TRAINING CORPS

For students who complete the curriculum of the Reserve Officers' Training Corps (as defined in General Orders No. 49 or as may be amended in the future by the War Department), the total number of hours required in the General Course for the degree of Bachelor of Sci-

ence in Education is 172 (instead of 190) Quarter-credit hours, including the work in military science, physical education and hygiene. For the other curricula in the College of Education a like reduction of eighteen Quarter-credit hours in the requirements for the degree is authorized. The requirements in the professional subjects of the curricula must be fully met.

MEDALS AND PRIZES

THE RHODES SCHOLARSHIPS

Men who have completed their Sophomore year at the Ohio State University are eligible to compete for the Cecil Rhodes Scholarships, tenable for three years at Oxford University, England, with a stipend of four hundred pounds each year. These scholarships are awarded on the combined basis of character, scholarship, athletics, and leadership in extra-curricular activities. Further information may be obtained from Professor Leigh Alexander, Oberlin College, Oberlin, Ohio, Secretary of the Rhodes Scholarship Committee of Selection for Ohio; or from the Dean of the College of Liberal Arts, Ohio State University.

THE WILLIAM EDWARD BINGHAM MEMORIAL MEDAL IN PHILOSOPHY

A medal is awarded annually to the undergraduate who presents the best essay on a philosophical topic. The conditions of the competition are fixed by the Philosophy Department. The medal, established in 1922, is a memorial to William Edward Bingham, a graduate student in philosophy in this institution from 1914 to 1916; he served in the United States Navy from April, 1917, to December, 1918, when he was accidentally drowned in the performance of his duties in the harbor of Tangier. The medal was executed by Mme. Anie Mouroux.

THE BRYAN PRIZE

Through the generosity of the late Hon. William J. Bryan an annual prize of \$60 is offered for the best essay on a subject involving the principles underlying the American government. Competition for this prize is open to all students in the University above the rank of Sophomore. For further information make inquiry of the Chairman of the Department of History.

THE VANDEWATER POETRY PRIZE

The Vandewater Poetry Prize was established Semicentennial Week by Mrs. Sarah O'Kane Raymund, '91, in honor of her grandfather. All students, graduate or undergraduate, *in residence* in the University are eligible to compete. No limit is set to the number of contributions that may be offered by one contestant. Announcement of the results is made in May; the award of \$25 is made to the successful contestant at Commencement and the winning poem is published in the University Monthly

and in The Lantern. The judges are members of the English Faculty or others chosen by them. If in any year none of the work submitted is of sufficient merit, the donor provides that the income be spent by the Department of English in books of poetry or criticism for the University Library.

THE JOHN GORDON BATTELLE MILITARY PRIZE

The John Gordon Battelle Military Prize of fifteen dollars in gold is awarded annually to the cadet in the Military Department who submits the best solution of a map problem. The winner is entitled to wear the "Battelle Sword" during the succeeding year.

PROFESSIONAL FRATERNITIES AND SORORITIES

Chapters of four national professional fraternities and sororities for men and women majoring in the fields of education have been organized at this University. These are: Phi Delta Kappa, Alpha Psi Delta, Sigma Delta Sigma, and Pi Lambda Theta.

Phi Delta Kappa, national educational fraternity, is represented on the Campus by Sigma chapter. It exists for the purpose of promoting research, scholarship, and fellowship among men interested in education. Members are selected from men of high scholastic and professional standards who are majoring in the field of education.

Alpha Psi Delta, national psychological fraternity, is represented by a chapter here. Its members are Seniors or graduates of high scholarship, who are specializing in psychology. The meetings are largely devoted to round table discussions of psychological topics.

Sigma Delta Sigma, national professional educational fraternity for undergraduates, has established Beta chapter at Ohio State University. The purpose of this organization is to foster interest in education as a profession. Members are elected from men registered in the College of Education who meet the requirements of character and scholarship.

Pi Lambda Theta, national honorary educational sorority, is open to women students of junior, senior, and graduate standing. The scholarship requirement necessary for eligibility to membership is a 3.5 point-hour ratio in all academic work. The meetings are devoted to the broadening of the teacher's outlook and the intensifying of her interest in education.

THE UNIVERSITY LIBRARY

The University Library consists of all books owned by the University and numbers approximately 315,000 volumes. The main part of the Library, which is known as the General Library, is housed in the Library building. Very important divisions of the book collection are housed in other buildings. A catalog of the entire collection is maintained in the General Library.

Any person is privileged to use the University Library for reference, but books may be drawn only by officers and registered students of the University.

The General Library is open from 7:30 a. m. to 9:30 p. m., Monday to Friday; Saturday from 7:30 a. m. to 5:30 p. m. Vacation hours are from 8 a. m. to 5 p. m. Monday to Friday; Saturday from 8 a. m. to 12 m. The Library is closed on legal holidays.

The University Library is a depository for the official publications of the United States and has a remarkably full collection of these documents. It also receives thousands of documents from states, cities, and foreign countries. The Library also possesses the British Parliamentary Papers including early rare volumes. The exchanges of the Ohio Academy of Science, of the Ohio State University Scientific Association and of the Ohio Biological Survey are deposited in the University Library.

The University Library is a depository for the Library of Congress catalog.

Of the department libraries nine are organized divisions of the University Library, in charge of library assistants.

The Botany and Zoology Library is located in the Botany and Zoology Building. The "Index to General Botanical Literature," the "Index to Algological Literature" and the card index of the Concilium Bibliographicum are in this departmental library.

Brown Hall Library, located in Brown Hall, contains collections of books on Architecture, Engineering Drawing and Civil Engineering. The collection of plates filed in this library is especially valuable for students in Architecture.

The Charles Cutler Sharp Library is located in the Chemistry Building. It contains not only the current periodicals and a large collection of dictionaries and handbooks on chemistry but also complete sets of all important journals dealing with subjects lying within the general field of chemistry and related sciences.

The Commerce Library, in the Commerce Building, includes a working collection of books for the undergraduate students in the College of Commerce. A large study room is maintained and also a reserve collection for their use is under the supervision of a trained librarian.

The Education Library is located in the Education Building. It is organized for graduate work and includes complete sets of important educational and psychological periodicals, city and state reports, textbooks and other works of reference on educational and psychological subjects. The work is carried on under the supervision of a trained librarian.

The Law Library is in Page Hall. It includes all of the United States and state reports, the English reports, the Irish reports, the latest statutes, codes and session laws of the states, complete sets of all the important legal periodicals and an up-to-date collection of textbooks. It is especially well equipped for the study of Ohio law.

The Lord Hall Library consists of collections of books on Ceramics, Mining, Metallurgy, and Mineralogy and is located in Lord Hall.

The Medical and Dental Library is in Hamilton Hall. This is a working collection of books, the historical books being shelved in the General Library.

The Orton Memorial Library, located in Orton Hall, is one of the finest geological libraries in the country. In addition, the Ohio Geological Survey deposits its document exchanges with the library. These two collections constitute a very complete set of official geological reports from the states, foreign governments and scientific societies.

Smaller collections are connected with many of the departments. The books relating to the Department of Fine Arts are collected in a special room known as the Art Reserve Room, where students have every facility for research.

The Library of the Ohio Archaeological and Historical Society, which is on the University Campus, is at the service of the officers and students of the University. This library is specializing in Ohio history and a very valuable collection is being built up.

ADMISSION

METHOD OF ADMISSION

The admission of students to the University is in charge of the Entrance Board, which determines the credits that shall be issued on all entrance examinations and certificates, and furnishes all desired information to applicants. Correspondence relating to admission should be addressed to the University Examiner, Ohio State University, Columbus.

ADMISSION TO COURSES LEADING TO A DEGREE

For complete entrance credit, an applicant for admission must be a graduate of a high school of the first grade or obtain credit by examination for fifteen entrance units.

For admission by examination or by certificate see the Bulletin of General Information.

DISTRIBUTION OF UNITS

As a basis for the most advantageous arrangement of a college course, applicants are advised to present the following units for admission: three in English; one in American history and civics; one in algebra; one in geometry; one in physics or chemistry; one in botany, zoology, or physiology; three in one foreign language; and four as choice may direct. If this work is not presented for entrance, the student's progress may be retarded. The exact requirements of the college curriculum are stated on pages 35 to 40.

ENTRANCE CONDITION IN ALGEBRA

A student who does not present for entrance one unit of algebra (through quadratics) will be admitted with a condition in this subject. This deficiency must be made up outside of university classes and the

student must pass an entrance examination in algebra before entering upon his second year of residence.

SPECIAL STUDENTS OF MATURE YEARS

A person of mature years who is unable to meet the foregoing entrance requirements in all respects, under certain circumstances, may be permitted to matriculate for specified courses for which he can demonstrate adequate qualifications. An applicant under twenty-one years of age will not be considered. Inquiry concerning such admission should be addressed to the Entrance Board, and to receive consideration must reach the Board not less than ten days in advance of the opening of the Quarter.

ENTRANCE TEST

The Ohio State University Intelligence Test, which is required of all students entering the University, has been approved by the State Department of Education as the entrance test to be administered by the College of Education in accordance with the statutory requirement (Ohio General Code, Sec. 7659), which prescribes that all applicants for admission to teacher training institutions in Ohio must pass an entrance examination.

As explained on page 20 of this *Bulletin*, the test is given at the opening of each Quarter of the academic year and at the beginning of each term of the Summer Quarter. Persons desiring to qualify for admission may, if they so desire, request the University Examiner to grant special permission to take this test at a regularly scheduled time prior to the beginning of the First Quarter or term of residence. Such application must be presented at least two weeks prior to the date set for the test. The test will be given on the following dates during the academic year 1928-1929; June 23, 1928; July 28, 1928; September 27 to October 1, and October 6, 1928; January 5, 1929; March 30, 1929. A student failing to pass the intelligence test is not thereby excluded from the University, but is not eligible to continue in the College of Education.

Students transferring to the Ohio State University from another institution which administers the Ohio State University Intelligence Test may present to the University Examiner with the transcript of credits a certified statement (on Form 2662) of the record made on the Ohio State University Intelligence Test at the other institution in lieu of taking the test at the Ohio State University.

REGISTRATION

FRESHMAN WEEK

All Freshmen are required to be present at the University for a special Freshman Program which precedes the opening of the University. This program will begin on Wednesday night, September 26, and continue through the following Monday, October 1. This session is known as Freshman Week.

During this period Freshmen will become familiar with the Campus. They will be given needed information on the history and traditions of the University, as well as definite information on student activities and eligibility requirements. There will be lectures and discussions of vital importance to any student beginning his college career, including instructions on how to study and talks on the care of health.

Intelligence tests, physical examinations, and placement tests are also a part of the Freshman Week Program.

The program of Freshman Week is planned to give students, new to the Campus, an opportunity to adjust themselves to new conditions before the regular routine of class-room work begins.

Freshmen must be present on the opening date, September 26, for the first meeting on that evening. A penalty of \$5.00 for each day of absence will be imposed. This is the usual penalty for late registration. The exercises of Freshman Week will be of the greatest benefit to the Freshmen and attendance upon them is required. All cases of failure to appear on this day or to be present at any of the exercises of Freshman Week will be reported to the President for action.

All Freshmen are urged to complete their registration and pay their fees before September 26, in order that they may be free to participate in the program of Freshman Week.

REGISTRATION

Under the Quarter plan each student will present his program of studies for only one Quarter at a time. Election cards for registration are obtained from the Registrar and are ready for distribution approximately two months prior to the opening of the Quarter. The exact date will be published in the Official Daily Bulletin and definite days will be announced during which every student in residence will be required to file his program of studies for the following Quarter. Persons who are not in residence may register in person or by mail at any time after the election cards are available for the following Quarter. Fees may be paid as soon as fee cards have been received by the student from the Registrar. Students who have registered sufficiently early usually receive fee cards approximately three weeks prior to the opening of the Quarter. *It is to the advantage of all students to register as early as possible, since the size of many sections is limited and they are completely filled early during the registration period.*

TIME OF REGISTRATION.—All undergraduate students are expected to register and pay their fees *before* the day designated in the University Calendar for classes to begin, and to report promptly to their classes on the first day that classes are scheduled. Class work begins the day following the last day announced for the payment of fees and all undergraduate students are expected to have completed registration and to report promptly to their classes.

Applicants presenting themselves after the opening of the Quarter can be admitted only for exceptional reasons and by action of the Execu-

tive Committee of the College. In general, a student who is permitted to enter after the close of the first week of a Quarter will be given a schedule diminished by one full course below the normal requirement for that student.

PROCEDURE FOR REGISTRATION

NEW STUDENTS.—Registration consists of the following steps in the order indicated. *Unless the student follows these instructions in every detail his registration in the University is not complete.*

(1) The student should secure

(a) An admission card from the University Examiner. (For necessary entrance credentials see Requirements for Admission, page 17.)

(b) An election card or study-program card from the Registrar's Office. This card must be approved by the Secretary of the College of Education and also by the Schedule Committee.

(c) A fee card from the Registrar's Office. On this card the student will be assessed all incidental, tuition, and laboratory fees. The fee card must be presented to the Bursar when the student pays his fees. All fees must be paid before the student will be admitted to classes. *Students should not attempt to pay fees without a fee card as this will only delay registration.*

(d) A University directory card from the Registrar's Office. Each year upon entering the University every student is required to file in writing, in the Office of the Registrar, his local address and his home address on the blank provided for this purpose. He must report promptly to the Registrar's Office all subsequent changes in either address, as long as he is connected with the University.

(2) Every entering student must report for a Physical Examination upon the dates appointed in the Freshman Week Program or on the date announced in the University Calendar for the students entering with advanced standing. The date of appointment for the Physical Examination will be mailed to the student. A penalty of \$1.00 will be assessed for failure to keep appointment for physical examination or for change in date of physical examination.

Men should report to the Medical Examiner for Men, at the Men's Gymnasium.

Women should report to the Medical Examiner for Women, at Pomerene Hall.

(3) Every new student entering the University is required to take an Intelligence Test under the direction of the Department of Psychology, upon the dates appointed in the Freshman Week Program or on the date announced in the University Calendar. (See page 3.)

(4) Every woman student must register with the Dean of Women at her office in Pomerene Hall during the week following the opening of the Quarter. Registration closes Saturday at 12. A penalty of \$5.00 will be assessed for failure to comply with this rule. (See page 25.)

STUDENTS IN CONTINUOUS RESIDENCE.—Students who have been in continuous residence in the University will proceed as follows. They should secure

(1) An election card or study-program card, which must be approved by the Secretary of the College of Education and also by the Schedule Committee. This card may be obtained at the Registrar's Office.

(2) A fee card from the Registrar's Office, on which will be assessed all incidental, tuition, and laboratory fees. This card must be presented at the Bursar's Office and all fees paid before the student will be admitted to classes.

FORMER STUDENTS.—A former student who has not been in continuous residence during the preceding year or was not in residence during the preceding Quarter should go at once to the Dean or Secretary of the College for approval of his re-admission. He then follows the same procedure as a student in continuous residence.

STUDENTS TRANSFERRING TO ANOTHER COLLEGE IN THE UNIVERSITY.—A student who desires to transfer from this College to another college of this University must make his application for such transfer to the University Examiner. This transfer must be approved by the University Examiner before the student will be permitted to proceed with his registration in the college which he is proposing to enter.

FEES AND EXPENSES

GENERAL CHARGES

All University fees must be paid at the opening of each Quarter as a condition of admission to classes. All registration fees, including laboratory deposits, are assessed in the Office of the Registrar and are paid in the Office of the Bursar. Registration is not complete until all fees have been paid. No student will have any privileges in the classes or laboratories until all fees and deposits are paid.

Since all fees are due and payable as a part of the student's registration, no person should come to the University for registration without money sufficient to cover all of his fees and deposits.

MATRICULATION FEE

Every student upon his *first admission to the University* is required to pay a matriculation fee of \$10.00 (non-returnable). This fee is paid but once and is in addition to other University fees and entitles the student to the privileges of membership in the University.

NON-RESIDENT FEE

Every student who is not a legal resident of the State of Ohio is required to pay a non-resident fee of \$35.00 each Quarter (or \$20.00 each term of the Summer Quarter) of his residence in the University in addition to other University fees. The burden of registering under proper residence is placed upon the student. If there is any possible

question of his right to legal residence the matter should be brought to the attention of the Registrar and passed upon, previous to registration or the payment of fees. Any student who registers improperly under this rule shall be required to pay not only the non-resident fee but shall be assessed a penalty of \$10.00. Students who do not pay this fee within thirty days after they have been notified that the non-resident fee has been assessed against them, will have their registration in the University cancelled.

No person shall be considered eligible to register in the University as a resident of the State of Ohio unless he has been a bona fide resident in the State twelve consecutive months next preceding the date of his original enrollment, and no person shall be considered to have gained or lost a residence in this State for the purpose of registering in the University by any conduct of his own while he is a student in the University; but persons whose legal residence follows that of other persons, as hereinafter provided, shall be considered to have gained or lost legal residence in this State for such purpose while students in the University according to changes of legal residence of such other persons, except that such legal residence shall not be considered to be so gained until twelve months after such other person becomes a legal resident of this State.

The residence of minors shall follow that of the legal guardian, regardless of emancipation; but in case a resident of Ohio is appointed guardian of a non-resident minor, the legal residence of such minor for the purpose of this rule shall not be considered to be established in the State of Ohio until the expiration of twelve months after such appointment.

The residence of wives shall follow that of husbands.

Aliens who have taken out their first citizenship papers and who have been residents of Ohio for twelve months next preceding the date of their enrollment in the University, shall be regarded as eligible for registration as residents of Ohio.

INCIDENTAL FEE

The fee for all students is \$20.00 each Quarter.

THE OHIO UNION AND THE WOMEN'S UNION

A fee of \$1.00 each Quarter is paid by all students at registration. This entitles the student to all the privileges of the Unions consistent with the Constitutions and House Rules governing them.

GYMNASIUM FEE

Students taking gymnasium work are required to pay a gymnasium fee of \$1.00 each Quarter, which includes locker and towel service.

Women students who are enrolled in Swimming classes are required to pay a Natatorium deposit of \$1.00 each Quarter for the use of bathing suits.

LABORATORY DEPOSIT

Students are required to pay for all materials consumed in laboratory work. To meet the cost of these materials a deposit ranging from

\$1.00 to \$20.00 for each course requiring such supplies is made at the time of registration before the student may enter the laboratory. All laboratory supplies are sold at the Laboratory Supply Store, Chemistry Building, to students, at cost to the University, and charged against the deposit. (See page 24.)

Instructors shall not permit students to engage in laboratory work unless first shown a receipt from the Bursar for deposits paid.

DEPOSIT FOR UNIFORM

Uniform is furnished Freshmen upon deposit of \$27.00 being made with the Bursar. The Federal Government refunds to the student through the Bursar's Office \$7.15 per year, payable at the end of the Spring Quarter of each year, a total of \$14.30 for the two years. The net cost of the uniform to the student is \$12.70.

The uniform should be kept in good repair throughout the Freshman and Sophomore years.

RETURN OF FEES

Return of Fees. (See page 24.)

TEXTBOOKS

Textbooks. Students should not purchase textbooks until they are advised by the instructors of their respective classes.

ROOM AND BOARD

Room and Board. (See Living Arrangements, page 28.)

GRADUATION FEE

A fee of \$5.00 to cover expense of graduation and diploma, is required of each person receiving one of the bachelor degrees from the University. This fee must be paid thirty days *before* the close of the Quarter in which the candidate expects to receive his degree. A penalty of \$5.00 will be assessed for failure to comply with this rule. (See page 26.)

FEES FOR INSTRUCTORS, GRADUATE ASSISTANTS, FELLOWS, SCHOLARS, AND GRADUATE NURSES

The following persons shall be exempt from all fees except a diploma fee of \$10.00, and a matriculation fee of \$10.00 (unless the latter fee has already been paid as an undergraduate fee), and the exemption shall include laboratory supplies, *but this exemption shall not apply unless the registration is completed within two weeks after the opening of the Quarter:*

(1) All members of the instructional force of the University, including Graduate Assistants, who are registered in the Graduate School of the University.

(2) All persons appointed Fellows or Scholars by the Board of Trustees and registered in the Graduate School.

(3) All instructors registered as students in any College of the University who have obtained their baccalaureate degree.

(4) All graduate nurses giving instruction in the classes in Public Health Nursing.

(5) All trained nurses employed in the Hospital of the College of Medicine.

CREDIT HOURS FOR INSTRUCTORS

The number of credit hours that may be taken by any graduate student who is not devoting his full time to the work (such as graduate assistants, part-time assistants, teachers in various schools and colleges, etc.) will be decided in each individual case by the Dean of the Graduate School and the student's adviser.

REFUND ON FEES

Fees are not returnable except in case of sickness and for causes entirely beyond the control of the student. No part of the fees shall be returned for voluntary withdrawal of the student or enforced withdrawal thirty days after the registration. Students withdrawing under discipline forfeit all rights to the return of any part of the fees. No fees will be returned in case of withdrawal of students until thirty days have elapsed from the date of withdrawal.

On Tuition Fees. If a student is forced to withdraw from the University during a Quarter, he must first secure permission from his Dean. On presentation of this permission to the Bursar a refund on tuition fees will be made for students who withdraw during the first thirty days of the Quarter. Such refunds will not be made until thirty days after the date of withdrawal. In no case shall more than one-half of the fee be refunded.

On Laboratory Deposits. If a student is forced to withdraw from a laboratory course during a Quarter, he must first secure permission from his Dean.

No portion of a laboratory deposit of \$5.00 or less shall be returned, unless the course is officially dropped by the student within thirty days after the payment of the deposit.

On a laboratory deposit of \$6.00 or more the unexpended part of the deposit is returnable if called for on or before the close of the Spring Quarter of the fiscal year in which the deposit has been made.

An order for refund for the unexpended portion of the deposit may be obtained by applying at the Laboratory Supply Store, Chemistry Building. The unexpended part of the deposit will be paid at the Bursar's Office on presentation of the order for refund.

On Deposit for Uniform. (See page 23.)

SPECIAL FEES—PENALTIES

PENALTY FOR ABSENCE DURING FRESHMAN WEEK

Freshmen must be present on the opening date, September 26, for the first meeting on that evening. A penalty of \$5.00 for each day of absence will be imposed. This is the usual penalty for late registration.

The exercises of Freshman Week will be of the greatest benefit to the Freshmen and attendance upon them is required. All cases of failure to appear on this day or to be present at any of the exercises of Freshman Week will be reported to the President for action.

PENALTY FOR LATE PAYMENT OF FEES

All fees must be paid by the close of the day preceding the first day of recitations. A penalty of \$5.00 for every succeeding day or fraction thereof, will be assessed for failure to comply with this rule, except in the case of a graduate student or a new student granted late registration by the Executive Committee.

A graduate student, or a new student granted late registration, must pay his fees within twenty-four hours of the date of registration as certified by his Dean or Secretary, or the penalty will be imposed.

FEE FOR DUPLICATE FEE RECEIPT

A duplicate receipt for fees will be issued only upon presentation of satisfactory evidence of the loss or destruction of the original. A fee of \$1.00 will be charged for each duplicate receipt.

PENALTY FOR FAILURE TO REGISTER WITH THE DEAN OF WOMEN

Every woman student must register with the Dean of Women at her office in Pomerene Hall during the week following the opening of the Quarter. Registration closes Saturday at 12. A penalty of \$5.00 will be assessed for failure to comply with this rule.

PENALTY FOR FAILURE TO KEEP APPOINTMENT FOR PHYSICAL EXAMINATION

A fee of \$1.00 will be assessed for failure to keep appointment for Physical Examination or for change in date of Physical Examination.

PENALTY FOR RE-REGISTRATION

When checks given for payment of fees are not paid on presentation at bank, registration will be cancelled and receipts given considered null and void. A penalty of \$5.00 will be assessed for re-registration.

PENALTY FOR LATE FILING OF ELECTION CARDS

A student who fails to file his election card within the required time (see page 19) will be assessed a fee of \$1.00 for each day of delay, the maximum fine being \$5.00.

FEE FOR CHANGES IN APPROVED ELECTION CARDS OR SCHEDULES

No changes will be made in approved election cards or schedule assignments at the request of the student without (1) the consent of the Dean or Secretary, (2) the payment of \$1.00 for each change involved. Unless exceptional reasons can be given, all such changes must be made during the first three days of the Quarter.

FEE FOR SPECIAL EXAMINATIONS

A fee of \$2.00 will be charged for each special examination. A student who is unable to take an examination in accordance with the official

schedule may obtain permission to take a special examination by complying with the following requirements in the order specified:

(1) Obtain the written consent of the instructor concerned on the blank provided for the purpose.

(2) Obtain the approval of the Dean of the College.

(3) Obtain the endorsement of the Bursar after the payment of the special fee of \$2.00.

Unless there is an imperative reason to the contrary (such as prospective absence during the next Quarter) all special examinations shall be held after the date of the regular examination.

PENALTY FOR LATE PAYMENT OF GRADUATION FEE

A special graduation fee is required of each person receiving a diploma from the University. This fee must be paid thirty days *before* the close of the Quarter in which the candidate expects to receive his degree. A penalty of \$5.00 will be assessed for failure to comply with this rule.

COST OF A YEAR'S WORK

One of the most perplexing questions that confronts a prospective student is what the course is going to cost him a year.

The total cost of a year's work—three Quarters, will depend considerably upon the course pursued. In some courses, such as chemistry, considerable material is used by the student, and this must be paid for by him. The cost of books is an item which varies greatly with the course. In general, it may be said that the legitimate cost a year ranges from \$600 to \$650 exclusive of traveling expenses.

In order to furnish information, we have listed below an estimate of the average payments required by the University for the Freshman year and have estimated the cost for room and boarding at a safe price. These two items are sometimes reduced slightly where two students occupy the same room and where boarding clubs are economically managed. Fees to the University are paid at the beginning of each Quarter.

ESTIMATE OF EXPENSES

Matriculation Fee (non-returnable).....	\$ 10 00
Incidental Fee	60 00
Ohio Union	3 00
Gymnasium Fee	3 00
Deposits to cover laboratory materials and breakage..	30 00
Deposit to cover uniform.....	27 00
Books	50 00
Board—36 weeks at \$7.00 a week.....	252 00
Room rent at \$15.00 a month.....	135 00
General Expenses	100 00
Total	<hr/> \$670 00

The item of *general expenses* is always subject to the personal habits of the individual, and varies according to the degree of economy exercised.

NOTE: In order to meet all the necessary expenses of registration, deposit for uniform, books, and other expenditures incident to securing a room and board, a student should come prepared to spend from \$125 to \$150 during the first ten days of a Quarter. After that period, his board and room rent will constitute the major part of his expenses.

ASSISTANTSHIPS AND SCHOLARSHIPS

GRADUATE ASSISTANTSHIPS OPEN TO GRADUATE STUDENTS

In order to encourage graduates of this University and of other similar and approved institutions, especially those in Ohio, to continue their studies and to pursue advanced work leading to the higher degrees, the University has established graduate assistantships in several departments. Graduate Assistants are elected for the year—four Quarters. During three Quarters, usually the Autumn, Winter and Spring, they must devote not to exceed one-half of their time to assisting in the work of the department in which they are pursuing their major work; during the remaining Quarter they are free to carry on their work at the University or elsewhere. Each Graduate Assistant must confer with the head of the department in which he is doing his major work concerning the Quarters that he must be in residence. A Graduate Assistant receives a stipend of \$500, payable in nine monthly installments, during the three Quarters in which he is rendering service. In addition all fees are remitted except a matriculation fee of \$10.00 if the Assistant has never attended the University and a diploma fee of \$10.00 if he receives a degree.

Students desiring to apply for Graduate Assistantships in any academic year must present their applications not later than March 1 of the preceding year. Application blanks may be obtained upon request by addressing the Dean of the Graduate School. The appointments to graduate assistantships are made annually in April.

SCHOLARSHIPS AND FELLOWSHIPS

In addition to the graduate assistantships, a limited number of scholarships and fellowships have also been established. The scholarships are open to students having a baccalaureate degree from an approved institution, and have a value of \$300 with exemption from all fees, except the matriculation fee and a diploma fee (\$10.00 each). The fellowships on the other hand, are open only to students who have at least the Master's degree or its equivalent, and have a value of \$500 with like exemption from all fees, except the matriculation fee and a diploma fee (\$10.00 each). Scholars and Fellows are selected on a basis of merit and must devote all their time to graduate work. They are elected for the year—four Quarters, but are required to be in residence only three Quarters, usually the Autumn, Winter, and Spring. Candi-

dates for these positions must file their applications not later than March 1. Application blanks may be obtained by addressing the Dean of the Graduate School.

LIVING ARRANGEMENTS

The President of the University has the authority to supervise living arrangements of students not residents of the City of Columbus and to order the immediate withdrawal of any student from any boarding or lodging house in which the surroundings are undesirable.

ROOMS AND BOARD FOR MEN

The University does not possess any dormitory facilities for men. Furnished rooms can be obtained at prices varying from \$10.00 to \$15.00 a month, and the cost of the table board in the clubs and restaurants near the University is from \$6.50 to \$8.00 a week. Board can be secured at the Ohio Union at reasonable prices.

Board with furnished rooms can be obtained in private families within convenient distance from the University at rates varying around \$10.00 a week.

WOMEN STUDENTS

The Ohio State University is open to women upon the same conditions and by the same methods of registration offered to men. Every woman student must register with the Dean of Women at her office in Pomerene Hall during the week following the opening of the Quarter. Registration closes Saturday at 12.

NOTE: A penalty of \$5.00 will be assessed for failure to comply with this rule.

LIVING ARRANGEMENTS FOR WOMEN

All living arrangements for women must be submitted to the Dean of Women for approval before consummation, and any change of housing must be made through her office.

DORMITORIES FOR WOMEN

Oxley Hall, the hall of residence for women, located at the southwest corner of the Campus on Neil Avenue, accommodates seventy-seven students. The hall contains suites, single and double rooms, with a students' sitting room, dining room, parlor, sun parlor, and laundry. The hall is governed by Student Government with the advice and supervision of the House Superintendent.

Mack Hall, the new dormitory for women, was opened October 1, 1923. It is joined to the south side of Oxley Hall by a cloister. This hall accommodates one hundred girls. It is modern in every respect, with running water in each room. It is under the same management as Oxley Hall.

Oxley Hall and Mack Hall are the only University-owned dormitories. For particulars, including rates, rules, etc., address Superintendent, Oxley Hall, Columbus, Ohio.

St. Hilda's Hall has been provided for the women students of the Episcopal Church, under the government of a Board of Trustees consisting of the Bishops and laymen of Southern Ohio and a local house committee of church women, the majority of whom are identified with the University.

For information address Superintendent of St. Hilda's Hall, 169 West Eleventh Avenue, Columbus, Ohio.

Westminster Hall (Presbyterian) provides a comfortable home for seventy-five girls. It consists of two houses connected by a new addition. The hall is located near the Fifteenth Avenue entrance to the University Campus.

For information, address Superintendent of Westminster Hall, 50 Fifteenth Avenue, Columbus, Ohio.

Neil Hall, a residence for women, accommodates three hundred students. For information, address Superintendent of Neil Hall, 1634 Neil Avenue, Columbus, Ohio.

PRIVATE ROOMING HOUSES

In addition to the foregoing there are between fifty and sixty privately-owned rooming houses under the supervision of the Housing Department of the University. For details, see the General Information Bulletin.

THE HEALTH OF WOMEN STUDENTS

It is the purpose of the University to safeguard and promote the health of students in every reasonable way. The Physical Examinations required of all entering women and Sophomore women are used in advising the students as to defects which need treatment or correction, as to the type of Physical Education work adapted to the needs of each student; and, in special cases, as to the academic load and outside work. Students needing special attention are watched through the year by the Medical Adviser.

The Department of Physical Education offers to University women opportunities for the development of habits which should aid them in the preservation of sound health and physical fitness. Through the acquirement of health habits the individual is enabled to establish a high standard of efficiency while in the University and to build a foundation which should influence her life after leaving the University.

The Director of Physical Education, the Medical Adviser to Women, and members of the staff hold daily office hours for student conferences.

SELF-SUPPORT

FOR MEN

The University cannot promise work to students who expect to work their way through college. Many students find work in private families, in offices, and in various occupations, by means of which they defray a portion of their expenses. A person of ability and energy who is master of a trade, or who can do good work of any kind, can generally

find employment, but prospective students are cautioned against depending wholly upon such uncertain sources of income.

Students should distinctly understand that where they attempt entire or partial self-support they should lengthen the term of study by applying for a part-time schedule. Students should not expect a special arrangement of class hours to accommodate their outside work. All outside work should be arranged with due regard to University obligations and classes which may occupy the Saturday morning hours as well as the late afternoon hours.

An employment bureau is maintained at the University Y. M. C. A., in Ohio Union, where the names of those seeking work and of those desiring workers are recorded. Very much depends, however, on the individual's power of initiative. Students should not come to the University expecting others to find places for them.

FOR WOMEN

The offices of the Dean of Women and the Student Y. W. C. A., located in Pomerene Hall, are glad to offer what assistance they can to young women to find suitable work. Few students are equal to the task of carrying a full University schedule successfully and at the same time earning sufficient money to meet their entire expenses. It is therefore important that students coming to the University for the first time be prepared to pay their expenses for the first Quarter. The opportunities for earning increase as students become acquainted with conditions and prove themselves able to carry both University and outside work. Young women must, however, recognize that competition is very keen as there are many more students than positions.

During the college year the Dean of Women and the assistants to the Dean of Women hold office hours in Pomerene Hall every week day except Saturday afternoon. They welcome all women students who care to come whether for advice, information, or conference.

Students should distinctly understand that where they attempt entire or partial self-support they should lengthen the term of study by applying for a part-time schedule. Students should not expect a special arrangement of class hours to accommodate their outside work. All outside work should be arranged with due regard to University obligations and classes which may occupy the Saturday morning hours as well as the late afternoon hours.

RULES AND REGULATIONS

STUDENT RESPONSIBILITY FOR COURSES

ADHERING TO A COURSE

Every student will be held responsible for the performance of all work assigned to him on his election card and for regular attendance upon his classes.

Every student, except a special student, shall be required to follow the prescribed order of courses in his curriculum. In case of temporary irregularity due to failure, or other causes, the student shall be required to select such courses in his curriculum as will make him regular as speedily as possible.

REPEATING HIGH SCHOOL WORK

If a student enters a course that presupposes a unit in the high school in the same subject (a course in foreign language, Chemistry 411 or Physics 403) and finds himself unable to carry this course, the Dean of his own initiative, or upon request of the instructor concerned, may transfer the student to a more elementary course. Upon completion of this course, the student will receive three hours credit instead of five hours.

REPEATING A COURSE

A student who repeats a course for which he has received collegiate credit for work done at this University or elsewhere, must meet all the requirements of the course, including regular attendance and examinations. His final grade will be substituted for the grade already recorded but he will not receive any additional credit for the course.

CHANGING A COURSE

No course may be changed except by favorable action upon a formal written request presented by the student to the Secretary of the College in which he is enrolled.

DROPPING A COURSE

A student is not at liberty to cease attending a course without permission of his Dean, or change a class section without the authorization of the Registrar. Disregard of this rule will make the student liable to a failure in the course and to discipline by the Executive Committee of his College.

WITHDRAWAL FROM A COURSE

A student shall not be permitted to withdraw from a course during the last six weeks of the Quarter without receiving a failure in the course, unless he secures the joint permission of the Dean of the College and the instructor concerned.

WITHDRAWAL FROM THE UNIVERSITY

A student who desires to withdraw from the University must apply to the Dean of the College for permission to withdraw in good standing. *If the student leaves the University at any time during the Quarter without communicating with the Dean of his college, he will be marked as having failed in all his courses for the Quarter.* If a personal interview is impossible, the Dean must be notified by mail. In order to retain his right to voluntary return, the reasons given for withdrawal must be satisfactory to the Dean, and must be so endorsed at the time the application is filed.

The written permission of the Dean shall be filed with the Registrar at once by the College Secretary that the proper entry may be made upon the University records.

If the permission to withdraw is withheld by the Dean and the student absents himself from the University notwithstanding, he will sacrifice his right to return and can obtain readmission only by petition to the Executive Committee of his College, as in the case of a student who has lost his standing by reason of failures.

No student may withdraw in good standing from the University within two weeks of the beginning of examinations unless he can show that his record to date is satisfactory.

When a student withdraws from the University during a Quarter his parent or guardian shall be notified of the fact by the Secretary of the College.

ABSENCES

OCCASIONAL ABSENCES

All occasional absences shall be adjusted with the instructors in whose classes they occur. Each department shall frame its own rules relative to occasional absences, but the Administrative Council shall have power to set aside an unreasonable rule. In no case shall absence be held to excuse a student from making up the work lost.

EXCESSIVE ABSENCE

If a student is absent from a course to such an extent as to imperil his credit, or is notably irregular in attendance, it shall be the duty of the instructor concerned to report the facts promptly to the Dean of the College in which the student is enrolled, and the Dean shall deal with the matter as a case of discipline.

ABSENCES BEFORE OR AFTER A MID-QUARTER VACATION

A student absent without excuse from a scheduled hour of work on a day immediately preceding or following a mid-quarter vacation (such as Thanksgiving, Washington's Birthday, Memorial Day, Independence Day) shall have a penalty of three hours (and 5.4 points) added to the requirements for his graduation. It shall be the duty of each instructor to report all such absences to the Dean of the College within five days following the vacation. For legitimate reason the Dean may excuse such absences, and he shall certify to the Registrar the list of all persons upon whom the penalty is to be imposed. The Registrar shall enter the penalty upon the student's record card.

NOTE: The object of this rule is to prohibit the extending of a holiday into a longer vacation. If the holiday falls upon a Friday or Monday, Saturday will not be counted for those students who have no work on that day, nor will the fact that a student has scheduled work on Saturday release him from that work or authorize him to be absent the following Monday. Sunday shall not be counted either as the day before or the day after a holiday.

THE MARKING SYSTEM AND POINT SYSTEM

The grade marks given in the several Colleges of the University are:
A—Excellent; B—Good; C—Average; D—Poor; E—Failed.

K (Credit) shall be used for work credited from other institutions and by the University Examiner only.

A value in "Points" is assigned to each of these grades as follows:

For each hour of A grade, 4 credit points shall be allowed

For each hour of B grade, 3 credit points shall be allowed

For each hour of C grade, 2 credit points shall be allowed

For each hour of D grade, 1 credit point shall be allowed

For each hour of K grade, 1.8 credit points shall be allowed

The grade of E receives no credit either in hours or points

The mark E cannot be removed by re-examination. (For removal of failures see page 34.)

POINTS REQUIRED FOR GRADUATION

The number of credit points required for graduation shall amount to not less than 1.8 times the number of credit hours undertaken by the student during his course as shown by his record card.

GRADUATE CREDIT FOR SENIORS

A Senior whose full time is not required in order to complete the work for his baccalaureate degree may select certain courses for graduate credit, but in order to do this the permission of the Graduate Council (Room 106, University Hall) must be obtained before registering for the courses.

LOW STANDING

DISMISSAL AND PROBATION FOR LOW STANDING

At the end of each Quarter, the Dean of a College shall dismiss from the University any student who fails to earn at least two-thirds as many points as the number of credit hours for which he is scheduled. He shall place on probation any student not out under the above rule (1) who fails to earn at least five points in excess of the number of credit hours for which he is scheduled; or (2) who fails to pass in at least two-thirds of his work. The period of probation shall extend through one Quarter of residence. No student shall be placed on probation more than twice under penalty of dismissal from the University.

The Executive Committee of a College shall have power to place a student on probation at any time for a definite period when in their judgment his scholastic standing is unsatisfactory. In every case of probation, the Dean of the College shall notify both the student and his parent or guardian.

DISMISSAL FOR LOW STANDING

At the end of one Quarter of Probation, the Dean of the College shall dismiss from the University any student: (1) Who fails to earn at least five credit points in excess of the number of credit hours for which he is scheduled; or (2) who fails to pass in at least two-thirds of his work.

In every case of dismissal the Dean shall notify both the student and his parent or guardian.

DISMISSAL FOR DEFICIENCY IN POINTS

A Dean shall refuse to register in the College he represents any student who has been registered in this University for nine Quarters and has not earned credit points equal to at least 1.7 times the number of hours undertaken during his residence and recorded on his record card. Moreover, a student who is eligible for registration for his tenth Quarter in the University, and who fails to maintain at least the ratio of 1.7 points per credit hour undertaken during any subsequent period of three consecutive Quarters of residence at the University, shall be ineligible for further registration. For good and sufficient reasons this rule may be waived in case of any individual student by a two-thirds vote of the Executive Committee of the College. A student entering the University from another institution will be regarded as though his entire residence had been at this University.

DISMISSAL BY SPECIAL ACTION

In cases not covered by the foregoing rules, if the preparation, progress, or success of a student in his assigned work is deemed unsatisfactory, the Executive Committee of the College shall have power to dismiss him from the University.

REMOVAL OF FAILURES

FAILURE IN A REQUIRED COURSE

At his first opportunity a student must repeat in class a required course in which he has failed, unless the Executive Committee of the College authorizes a substitute course. In a course continuing through two or more Quarters, a failure in any given Quarter must be removed by successful repetition in class before the student will be admitted to the work of the succeeding Quarter.

FAILURE IN AN ELECTIVE COURSE

A failure in an elective course may be removed by repetition in class, and must be so removed before a student will be allowed to proceed in a continued course. On petition, the Executive Committee of the College may excuse a student from repeating an elective course.

GRADUATION

POINTS REQUIRED FOR GRADUATION

The number of credit points required for graduation shall amount to not less than 1.8 times the number of credit hours undertaken by the student during his course as shown by his record card. (For Point System see page 33.)

GRADUATION FEE

A special graduation fee is required of each person receiving a diploma from the University. This fee must be paid thirty days before the close of the Quarter in which the candidate expects to receive his

degree. A penalty of \$5.00 will be assessed for failure to comply with this rule.

COMMENCEMENT—CONVOCATION

A special Convocation or Commencement shall be scheduled at the close of each Quarter for the conferring of degrees upon candidates who have fulfilled all the requirements of their respective courses.

ATTENDANCE AT CONVOCATION EXERCISES

All candidates for degrees are required to be present at their graduation convocation unless excused by the President. Only those students who are to receive their degrees at a given convocation may appear in the class procession on that occasion or be seated with the graduating class.

GENERAL AND SPECIAL CURRICULA

Two general classes of curricula have been provided, both of which lead to the degree of Bachelor of Science in Education.

The first of these provides a wide range of electives and seeks to train superintendents, principals, and teachers in high schools, elementary schools, and rural schools. While the requirements are definite and fixed, the student may choose from a number of subjects the major branch in which he expects to qualify for teaching. Correlated with this will be minor subjects which he may teach.

The second class provides fixed courses, permitting comparatively little election, for the definite purpose of preparing teachers and supervisors in fine arts, music, home economics, manual training, and physical education; school nurses, teachers in schools of nursing, teachers and supervisors of commercial subjects, and teachers in part-time and continuation schools and classes.

REQUIRED SUBJECTS

Academic Subjects Required in All Curricula

(1) English—ten Quarter-credit hours.

English composition (English 401) five Quarter-credit hours and English literature (English 433, 441, 442, or 446) five Quarter-credit hours, must be taken by all students. Students who enter with less than three units in English will be assigned additional work in English to make up their deficiency.

(2) Biological Science—ten Quarter-credit hours.

A biological science shall mean botany, zoology, physiology, or anatomy. Ten Quarter-credit hours in one biological science must be taken in college, regardless of whether any biological science has been taken in high school.

NOTE: Students registered in the Fine Arts curriculum may take ten hours in Geology instead of ten hours in a biological science; if they take a biological science it must be Zoology. Students in the Music Curriculum are advised to offer ten hours of one biological science, but may offer ten hours in any other science as substitute, with the consent of the Head of the Department of Music.

(3) Social Science—ten Quarter-credit hours.

A social science shall include a course in the Department of Economics, Geography, History, Political Science, or Sociology. The student must take in college ten Quarter-credit hours in one of the social sciences.

NOTE: Students who enter without high school credit in American History must meet this requirement by taking ten Quarter-credit hours in American History.

(4) Foreign Language.

Students who have credit for two units of some one foreign language taken in high school are not required to take any foreign language in college. Students who enter with less than this amount must take a minimum of three Quarters of one foreign language in college.

(5) Physics or Chemistry.

A student who enters without one unit in physics or chemistry must take two Quarters work in one of these subjects in college during the first two years of his residence.

(6) Mathematics.

As indicated under admission (page 17) every student is expected to have secured credit in high school for algebra through quadratics. Students who enter without this credit will be conditioned.

Professional Subjects Required in all Curricula

(1) Psychology 401 and 407, ten Quarter-credit hours.

Elementary Psychology 401, five Quarter-credit hours, must be taken by all students. When possible it is recommended that Psychology 402 be taken in addition to Elementary Psychology 401.

(2) History of Education 404 and 405, six Quarter-credit hours; in the curriculum for Elementary Teachers, History of Education 401, five Quarter-credit hours, instead of 404 and 405; in the curriculum in Industrial Arts Education, History of Education 607 and 405, total five Quarter-credit hours, instead of 404 and 405.

(3) Principles and Practice of Education: 401, five Quarter-credit hours, required of all students; 440, five Quarter-credit hours, for all students except those in the curriculum for Elementary Teachers, Supervisors and Principals; 410, five Quarter-credit hours, for students majoring in English, history, foreign language, mathematics, science, industrial arts education, music, commercial subjects and journalism; in the curriculum for Elementary Teachers, Supervisors and Principals, 441, ten Quarter-credit hours (instead of 440), 430, five Quarter-credit hours (instead of 410), and nine Quarter-credit hours selected with the approval of the department from the following courses: 492, 493, 494 and 495; for students majoring in non-biological sciences four Quarter-credit hours selected from 660, 661, 364, 365, 382 and 383; for students majoring in history and social sciences 663, five Quarter-credit hours, or 384 and 385, three Quarter-credit hours each.

(4) School Administration 600 and 601, six Quarter-credit hours.

NOTE: Students in the Fine Arts, Music, and Physical Education curricula are not required to take School Administration 601.

(5) Survey of Education, one Quarter-credit hour.

NOTE: Required of all Freshmen; not open to students who enter the College of Education with Sophomore, Junior or Senior standing.

(6) Industrial Arts Education 600, three Quarter-credit hours, is required of all men students, except those majoring in Physical Education.

(7) A course in the teaching of the major subject, not less than three Quarter-credit hours. This course should be taken by the student before registering for Supervised Teaching in the major subject.

(8) Public Speaking 459, three Quarter-credit hours, required of all students majoring in English, unless excused by the instructor.

NOTE: Early in the Autumn Quarter a speech test will be given by the division of Public Speaking to determine who shall take and who may be excused from this course. See description of this course, page 103.

(9) Music 447, two Quarter-credit hours, and 448, three Quarter-credit hours are required in the curriculum for Elementary Teachers, Supervisors and Principals.

(10) All students except those pursuing one of the curricula in Fine Arts, Music, Home Economics, Physical Education, and Industrial Arts Education, must obtain additional professional work to make a total of fifty Quarter-credit hours in this group. Students not in any of these curricula must elect courses in the Departments of History of Education, Principles and Practice of Education, Psychology, School Administration, and Vocational Education to bring the credit in this group to a total of fifty Quarter-credit hours.

For students in the Home Economics curriculum, the total requirement in this group is forty-one Quarter-credit hours. For students in any of the following curricula: Fine Arts, Industrial Arts Education, or Physical Education, the total required is forty-five Quarter-credit hours. The professional courses required of the student majoring in Music are all specifically listed in the curriculum outline, and total fifty-three to fifty-six Quarter-credit hours.

Students who are registered in the Commercial and Journalism Teacher Training curricula, or in the curriculum in Vocational Education, may count within this fifty hours of professional work, required courses in Vocational Education.

MAJOR AND MINOR SUBJECTS

Students are advised to elect majors and minors in subjects commonly taught in the schools. In all cases the student's major and minor shall be approved by the Secretary of the College of Education.

DECLARATION OF MAJOR AND MINOR

Not later than the beginning of the Junior year, each student must file in the office of the Secretary of the College, a statement declaring his major and minor subjects.

STANDARD REQUIRED IN THE MAJOR

The quality of work in the student's major which will meet the requirements of the College of Education is defined by the following statement, which applies to all students whether following the general curriculum or one of the special fixed curricula:

An average point-hour ratio of 2.25 in the major subject on all courses taken at this University after the Summer Quarter of 1928 will be required for admission to supervised teaching (Principles of Ed-

ucation 440 or 441). Students transferring from other institutions and requesting credit for Principles of Education 440 will be required to fulfill the 2.25 point-hour ratio before such credit shall be granted. Application of the rule to transferred students shall terminate at the close of the Quarter preceding the Quarter of graduation.

MAJOR AND MINOR

(For Students in the General Curriculum)

In general, a major or a minor in the College of Education means a major or minor in *one subject*. Forty-five Quarter-credit hours is sufficient for such a major, or twenty-five hours for such a minor, except in the case of foreign language. If a student is majoring in a foreign language of which he had none in high school, he must secure fifty hours credit in that language; if minoring, thirty hours. If a student has high school credit for a year or more of the language in which he is majoring or minoring, then forty-five hours will be sufficient for a major and twenty-five hours for a minor.

Courses taken in fulfillment of the academic group requirement (pages 35 and 36) may be credited toward the fulfillment of the requirement in the corresponding major or minor.

There are some instances in which closely related subjects may be combined for a major or a minor. Combinations regularly permitted are given below. In all cases where combinations are made, fifty hours must be offered as a major, thirty hours as a minor. At least ten hours must be taken in any subject presented as part of a major.

- (1) History forty hours and Political Science ten hours in accordance with the sequence on page 60.
- (2) History and Social Sciences in accordance with the statement on page 60.
- (3) Botany, Zoology and Physiology (All three permitted for Major, but not more than two for Minor). See suggested sequence in biological sciences, page 58.
- (4) Geology and Geography for Major or Minor.
- (5) Industrial Arts Education, and other technical departments, provided these courses are combined in accordance with the sequence of courses on page 56.
- (6) Vocational Education, Industrial Arts Education, Industrial Engineering, and Engineering Drawing, provided these courses are combined in accordance with the sequence of courses given on pages 56 and 57.
- (7) Physics and Chemistry
- (8) Physics and Mathematics
- (9) English forty hours and Public Speaking ten hours.

Professional subjects may be chosen as minors but not as majors except in the case of Psychology, which may be used as a major by those preparing for psychological positions in the public schools. All psychology offered as a major must be exclusive of courses in Psychology offered as professional work. A student minoring in any professional subject must obtain twenty-five hours in that subject over and above the

courses regularly required therein which are included in the fifty hours professional work required for a degree.

Combinations of two or more professional subjects—e.g., History of Education and Principles of Education, may not be offered as minors.

Courses in special methods in the various subjects—e.g., Principles of Education 715 (Teaching of English), Principles of Education 700 (Teaching of American History), etc., are credited under professional subjects and are not credited toward majors or minors.

Students majoring in Fine Arts, Music, Commercial Subjects, Journalism, Home Economics, Education-Science Nursing, Industrial Arts Education, or Physical Education, or students preparing to teach in Elementary Schools or in Part-time and Continuation Schools and Classes, will follow the fixed curricula outlined on the succeeding pages of this *Bulletin*. Such students are not, in general, subject to the foregoing regulations with respect to major and minor subjects. The fixed curricula automatically provide for the major and minor requirements, unless the contrary is indicated by note.

Students majoring in subjects for which there are no fixed curricula will follow the GENERAL CURRICULUM. Some departments (e.g., Chemistry, English, German, etc.) have provided suggested sequences of courses for the guidance of students majoring in them. In some cases, minor sequences have also been outlined. These major and minor sequences will be found on pages 56 to 64.

Elective Courses

The word "elective" is generally used in two senses. (1) It is used to designate those courses which are not taken to meet any specific requirement. Unless a student's high school preparation has been deficient, he usually has opportunity to include a number of such courses in the total of 190 Quarter-credit hours required for the degree and thereby to diversify and enrich his education in the direction of his personal interests. (2) When the word appears in a given Quarter of an outlined curriculum it means simply that out of the fifteen or more hours which the student will normally be carrying in that Quarter, a certain number are to be used in some way not prescribed in advance. One student may use these hours toward meeting his foreign language requirement, another may use them in taking some course which falls within his major or minor field, and still another may take a course which does not meet any specific requirement—i.e., which is elective in the first sense of the word as above defined.

GENERAL CURRICULUM

FIRST YEAR

Autumn Quarter	Winter Quarter	Spring Quarter
Biological Science	5 Biological Science	5 Psychology (401) 5
*Social Science	5 Social Science	5 English (401) 5
Foreign Language	Foreign Language	Foreign Language
or Elective	5 or Elective	5 or Elective 5
Survey of Education	1 Military Science	1 Military Science 1
Military Science	1 Physical Education	1 Hygiene (400) 1
Physical Education	1	Physical Education 1

* See note regarding Social Science on page 40.

COLLEGE OF EDUCATION

SECOND YEAR

Autumn Quarter		Winter Quarter		Spring Quarter	
Psychology	(407) 5	English (483, 441, 442, or 446)		Prin. of Education	(401) 5
Military Science	1			5 Military Science	1
Physical Edu. (Women)	1	Military Science		1 Physical Edu. (Women)	1
Elective	10	Physical Edu. (Women) Elective		1 Elective	10
				10	

THIRD YEAR

History of Education	(404) 3	History of Education	(405) 3	Special Methods	3
Industrial Arts Edu. (Men)	(600) 3	Elective		12 Elective	12
Elective	9 or 11				

FOURTH YEAR

School Admin.	(600) 3	School Admin.	(601) 3	Prin. of Education	(440) 5
Elective	12	Elective		12 Prin. of Education	(410) 5
				Elective	9

NOTE: A social science shall include a course in American History, Economics, European History, Geography, Political Science, or Sociology. In case the student desires to satisfy this requirement by electing work in Economics, Sociology, or Political Science he will have to postpone it until the second year.

From the "Elective" hours the student must offer a major consisting of 45 to 50 Quarter-credit hours in one field, and a minor consisting of 25 to 30 Quarter-credit hours in another field, and must also provide for any general academic or professional requirements (such as Physics or Chemistry, for those who have not had one of these subjects in high school), whose place is not specifically indicated in the outline of the curriculum. Students should choose for their major and minor work those subjects which they expect to teach.

In cases where the best interests of the student require it, courses may be taken in Quarters other than those specified in the above curriculum.

REQUIREMENTS FOR A DEGREE

Upon the satisfactory completion of one hundred and ninety Quarter-credit hours, under the restrictions and requirements prescribed above, the student will be recommended for the degree of Bachelor of Science in Education.

FINE ARTS

FIRST YEAR

Autumn Quarter		Winter Quarter		Spring Quarter	
Zoology or Geology	(401) 5	Zoology or Geology	(402) 5	Psychology	(401) 5
General		General		Elementary	
History	(401) 5	History	(402) 5	English	(401) 5
Modern European		Modern Europe		Composition and	
History to 1789		since 1789		Reading	
Fine Arts	(421) 5	Fine Arts	(423) 5	Fine Arts	(431) 5
Freehand Drawing		Advanced Freehand		Design	
Survey of Education	1	Drawing		Military Science	1
Military Science	1	Military Science		1 Hygiene	(400) 1
Physical Education	1	Physical Education		1 Physical Education	1

SECOND YEAR

Autumn Quarter		Winter Quarter		Spring Quarter	
Psychology	(407) 5	English (438, 441, 442, or 446)	5	Fine Arts (461 or 424)	5
Educational		American Literature,		Modelling or	
Fine Arts	(451) 5	Nineteenth Century		Life Drawing	
History		Poetry or Prose		Fine Arts	(453) 5
Military Science	1	Fine Arts	(452) 5	History	
Physical Edu. (Women)	1	History		Military Science	1
Elective	5	Military Science	1	Physical Edu. (Women)	1
		Physical Edu. (Women)	1	Elective	5
		Elective	5		

THIRD YEAR

History of Education	(404) 3	History of Education	(405) 3	Fine Arts	(441 or 442) 5
History of Modern		History of Modern		Water Color or Oil	
Education		Education		Prin. of Education	(401) 5
Fine Arts	(424 or 461) 5	Fine Arts	(425 or 432) 5	Elective	5
Life Drawing or Modelling		Life Drawing			
Prin. of Education	(750) 3	or Design			
Teaching of		Prin. of Education	(751) 3		
Mechanical Drawing		Teaching of			
Elective	5	Mechanical Drawing			
		Elective	5		

FOURTH YEAR

School Admin.	(600) 3	Elective	15	Prin. of Education	(440) 5
Fundamentals				Supervised Teaching	
Fine Arts	(471) 5			Elective	10
Theory and Practice					
Fine Arts	(443 or 444) 5				
Oil or Water Color					
Elective	3				

NOTE: The student must offer a minor consisting of 25 to 30 Quarter-credit hours. This minor may be taken in the History of Fine Arts.

REQUIREMENTS FOR A DEGREE

Upon the satisfactory completion of one hundred and ninety Quarter-credit hours, under the restrictions and requirements prescribed above, the student will be recommended for the degree of Bachelor of Science in Education.

HOME ECONOMICS

FIRST YEAR

Autumn Quarter		Winter Quarter		Spring Quarter	
Fine Arts	(426) 5	Home Economics	(401) 5	Home Economics	(402) 5
Chemistry	(401 or 411) 5	Chemistry	(402 or 412) 5	English	(401) 5
†Foreign Language		†Foreign Language		††Foreign Language	
or Elective	5	or Elective	5	or Elective	5
Survey of Education	1	Physical Education	(422) 1	Hygiene	(400) 1
Physical Education	(421) 1			Physical Education	(428) 1

†Students who have credit for two units of some *one* foreign language taken in high school are not required to take any foreign language in college. Students who enter with less than this amount must take a minimum of three Quarters of one foreign language in college.

††Students who do not take three Quarters of foreign language should elect Psychology (401) in the Spring Quarter of the first year rather than in the Spring Quarter of the second year.

SECOND YEAR

Autumn Quarter		Winter Quarter		Spring Quarter	
Physiology	(407) 5	Physiology	(408 or 409) 5	Psychology	(401) 5
Agr. Engineering	(406) 5	Agr. Chemistry	(402) 5	Agr. Chemistry	(403) 5
Home Economics	(411) 5	Home Economics	(412) 5	English	5
Physical Education	(425) 1	Physical Education	(426) 1	Physical Education	(427) 1

THIRD YEAR

History of Education	(404) 3	Home Economics	(403) 5	Prin. of Education	(401) 5
Engr. Drawing	(437) 2	Engr. Drawing	(438) 3	History of Education	(405) 3
Home Economics	(611) 5	Psychology	(407) 5	Economics	(407) 5
Bacteriology	(607) 5	Fine Arts	(436) 3	Public Health	(407) 2

FOURTH YEAR

School Admin.	(600) 3	School Admin.	(601) 3	*Prin. of Education	(440) 5
Sociology	(401) 5	Elective	12	Elective	10
Home Economics	(641) 5				
Home Economics	(511) 3				

REQUIREMENTS FOR A DEGREE

Upon the satisfactory completion of one hundred and ninety Quarter-credit hours, under the restrictions and requirements prescribed above, the student will be recommended for the degree of Bachelor of Science in Education.

* Students registering for this course should plan their schedules so as to meet in conference at the same hour as Home Economics 642. For this purpose consult Home Economics Time Schedule.

MUSIC

The following courses constitute a major curriculum in school music. Students electing this curriculum will not be required to offer a minor.

FIRST YEAR

Autumn Quarter		Winter Quarter		Spring Quarter	
Science	5	Science	5	Psychology	(401) 5
History	(401) 5	History	(402) 5	Elementary	
Modern European		Modern Europe		English	(401) 5
History to 1789		since 1789		Composition and	
Music	(476) 3	Music	(478) 3	Reading	
Elementary Sight Sing-		Elementary Sight Sing-		Music	(479) 3
ing and Ear Training		ing and Ear Training		Elementary Sight Sing-	
Music	(A) 0	Music	(A) 0	ing and Ear Training	
University Chorus		University Chorus		Music	(A) 0
Music	(501) 2	Music	(502) 2	University Chorus	
Applied		Applied		Music	(503) 2
Survey of Education	1	Military Science	1	Applied	
Military Science	1	Hygiene	(400) 1	Military Science	1
Physical Education	1	Physical Education	1	Physical Education	1

SECOND YEAR

Autumn Quarter		Winter Quarter		Spring Quarter	
Psychology	(407) 5	English	(433) 5	Prin. of Education	(401) 5
Educational		American Literature		Principles	
Music	(442) 3	Music	(430) 4	Music	(431) 4
School Music		History and		History and	
Music	(460) 3	Appreciation		Appreciation	
Harmony		Music	(461) 3	Music	(462) *
Music	(482) 3	Harmony		Harmony	
Intermediate Sight Sing- ing and Ear Training		Music	(483) 2	Music	(445) 3
Music	(A) 0	Intermediate Sight Sing- ing and Ear Training		School Music	
University Chorus		Music	(A) 0	Music	(A) 0
Music	(504) 1	University Chorus		University Chorus	
Applied		Music	(505) 1	Music	(506) 1
Military Science	1	Applied		Applied	
Physical Edu. (Women)	1	Military Science	1	Military Science	1
		Physical Edu. (Women)	1	Physical Edu. (Women)	1

THIRD YEAR

Public Speaking	(459) 3	Music	(465) 3	Music	(468) 3
Principles and Prac- tice of Oral Reading		Harmonic Analysis		Form	
Music	(610) 2	Music	(459) 2	Music	(611) 2
Music in the		Conducting		High School Music	
Junior High School		Music	(486) 1	Prin. of Education	(410-5) 5
Music	(445) 1	Advanced Sight Sing- ing and Ear Training		Methods of High School Teaching	
Advanced Sight Sing- ing and Ear Training		Music	(A or B) 0	School Admin.	(600) 5
Music	(A or B) 0	University Chorus or Orchestra		Fundamentals	
University Chorus or Orchestra		Music	(503) 1	Music	(A or B) 0
Music	(507) 1	Applied		University Chorus or Orchestra	
Applied		Modern Language		Music	(509) 1
Modern Language		or	5	Applied	
or	5	Elective		Modern Language	
Elective		*Elective	3	or	5 or 4
*Elective	3			*Elective	

FOURTH YEAR

Prin. of Education	(410-5) 2	Music	(603) 4	Prin. of Education	(440-5) 3
Methods of High School Teaching		Modern Music		Supervised Teaching	
Prin. of Education	(440-5) 2	Ind. Arts Edu. (Men)	(600) 3	Music	(635) 3
Supervised Teaching		Introduction		Instrumentation	
History of Edu.	(404) 3	Music	(632) 3	Music	(A or B) 0
History of Modern Education		Instrumentation		University Chorus	
Music	(601) 4	Music	(A or B) 0	or Orchestra	
The Romanticists		University Chorus or Orchestra		Music	(512) 1
Music	(630) 3	Music	(511) 1	Applied	
Instrumentation		Applied		History of Edu.	(405) 3
Music	(A or B) 0	Psychology	(613) 3	History of Modern Education	
University Chorus or Orchestra		Mental and Edu- cational Tests		*Elective	5
Music	(510) 1	*Elective (Women)	5		
Applied		*Elective (Men)	1		

* Electives to be selected from courses other than those in the Department of Music.

NOTE: *Observation and Participation.* To meet the requirement in observation and participation, students should register for Principles of Education 410, 5 hours, in

the Spring Quarter of the third year; the work of the course will continue during this Quarter and the Autumn Quarter of the fourth year.

Supervised Teaching. To meet the requirement in supervised teaching, students should register for Principles of Education 440, 5 hours, in the Autumn Quarter of the fourth year; the work of the course will continue during this Quarter and the Spring Quarter of the fourth year.

REQUIREMENTS FOR A DEGREE

Upon the satisfactory completion of one hundred and ninety Quarter-credit hours, under the restrictions and requirements prescribed above, the student will be recommended for the degree of Bachelor of Science in Education.

COMMERCIAL AND JOURNALISM TEACHER TRAINING CURRICULA

Students who expect to enter the field of journalism or to engage in personnel or educational work in industry or in business should register in the College of Commerce and Administration.

The following curricula are designed for the preparation, respectively, of teachers of accounting, commercial geography, office practice, retail selling, and journalism. With the exception of Journalism, the first two years are the same for all curricula.

FIRST YEAR

Autumn Quarter		Winter Quarter		Spring Quarter	
English	(401) 5	Geography	(401) 5	Geography	(403) 5
Biological Science	5	Biological Science	5	American or European History	5
Survey of Education	1	Vocational Education	(501) 1	Military Science	1
Military Science	1	Military Science	1	Physical Education	1
Physical Education	1	Physical Education	1	Hygiene	(400) 1
Elective	4	Elective	4	Elective	4

SECOND YEAR

Autumn Quarter		Winter Quarter		Spring Quarter	
American or European History	5	Economics	(401) 5	Economics	(402) 5
*English (Literature)	5	Accounting	(401) 5	Accounting	(402) 5
Military Science	1	Military Science	1	Military Science	1
Physical Edu. (Women)	1	Physical Edu. (Women)	1	Physical Edu. (Women)	1
Foreign Language or Elective	5	Foreign Language or Elective	5	Foreign Language or Elective	5

* Must be taken from one of the following English courses: 433, 441, 442, 446.

MAJOR IN ACCOUNTING **

THIRD YEAR

Autumn Quarter		Winter Quarter		Spring Quarter	
Accounting	(601) 5	Accounting	(602) 5	Bus. Organization	(627) 3
Bus. Organization	(621) 3	Bus. Organization	(625) 3	Prin. of Education	(485) 3
Psychology	(401) 5	Elective	8	Psychology	(407) 5
Prin. of Education	(401) 5			Vocational Education	(507) 3
				†Elective	3

** Students expecting to enter the field of accounting should enroll in the College of Commerce and Administration.

† Must be advanced courses in Accounting, Business Organization, Economics or Geography.

FOURTH YEAR

Autumn Quarter		Winter Quarter		Spring Quarter	
Accounting	(603) 3	Accounting	(604) 3	School Admin.	(601) 3
Prin. of Education	(410) 5	Economics	(610) 5	Accounting	(616) 3
Prin. of Education	(440) 5	School Admin.	(600) 3	Vocational Education	(506) 3
History of Education	(404) 3	History of Education	(405) 3	Vocational Education	(606) 3
				Elective	3

NOTE: The student is expected to offer a minor of 25 to 30 hours subject to the approval of the Head of the Department of Industrial Arts Education and the Secretary of the College.

MAJOR IN COMMERCIAL GEOGRAPHY *

THIRD YEAR

Autumn Quarter		Winter Quarter		Spring Quarter	
Geography	(632) 3	Elective	15	Geography	(631) 3
Prin. of Education	(401) 5			Prin. of Education	(485) 3
Psychology	(401) 5			Vocational Education	(507) 3
Geography	(422) 3			Psychology	(407) 5
				Elective	3

FOURTH YEAR

Geography	(604) 2	Geography	(634) 3	Geography	(603) 4
Geography	(641) 2	School Admin.	(600) 3	Geography	(606) 2
History of Education	(404) 3	History of Education	(405) 3	Vocational Education	(506) 3
Prin. of Education	(410) 5	Elective	5	Vocational Education	(606) 3
Prin. of Education	(440) 5			School Admin.	(601) 3

NOTE: The student is expected to offer a minor of 25 to 30 hours subject to the approval of the Head of the Department of Industrial Arts Education and the Secretary of the College.

* Students expecting to engage in geographical work in industry, in business, or in government should enroll in the College of Commerce and Administration.

MAJOR IN OFFICE PRACTICE

THIRD YEAR

Autumn Quarter		Winter Quarter		Spring Quarter	
History of Education	(404) 3	History of Education	(405) 3	Prin. of Education	(485) 3
Prin. of Education	(401) 5	Bus. Organization	(640) 3	Vocational Education	(507) 3
Bus. Organization	(621) 3	English	(405) 5	Bus. Organization	(700) 5
Psychology	(401) 5	Elective	5	Psychology	(407) 5

FOURTH YEAR

Prin. of Education	(410) 5	School Admin.	(600) 3	School Admin.	(601) 3
Prin. of Education	(440) 5	Bus. Organization	(691) 4	Vocational Education	(506) 2
Bus. Organization	(604) 3	Bus. Organization	(605) 3	Bus. Organization	(625) 3
Elective	4	Elective	6	Vocational Education	(606) 3
				Elective	5

NOTE: The student is expected to offer a minor of 25 to 30 hours subject to the approval of the Head of the Department of Industrial Arts Education and the Secretary of the College.

MAJOR IN RETAIL SELLING

THIRD YEAR

Autumn Quarter		Winter Quarter		Spring Quarter	
Bus. Organization	(621) 3	Bus. Organization	(712) 4	Bus. Organization	(716) 3
Bus. Organization	(700) 5	Bus. Organization	(623) 3	Prin. of Education	(485) 3
Psychology	(401) 5	Elective	9	Psychology	(407) 5
Prin. of Education	(401) 5			** Elective	3

** Must be courses in Accounting Geography, or Business Organization, and in the "600" group.

FOURTH YEAR

Autumn Quarter		Winter Quarter		Spring Quarter	
History of Education	(404) 3	History of Education	(405) 3	School Admin.	(601) 3
Prin. of Education	(410) 5	Bus. Organization	(702) 4	Bus. Organization	(705) 4
Prin. of Education	(440) 5	School Admin.	(600) 3	Vocational Education	(506) 2
Vocational Education	(505) 2	Elective	6	Vocational Education	(507) 3
Elective	3			Vocational Education	(606) 3

NOTE: The student is expected to offer a minor of 25 to 30 hours subject to the approval of the Head of the Department of Industrial Arts Education and the Secretary of the College.

REQUIREMENTS FOR A DEGREE

Upon the satisfactory completion of one hundred and ninety Quarter-credit hours, under the restrictions and requirements prescribed above, the student will be recommended for the degree of Bachelor of Science in Education.

CURRICULUM FOR TEACHERS OF JOURNALISM*

Autumn Quarter		Winter Quarter		Spring Quarter	
English	(401) 5	English	(433) 5	English	5
Language	5	Language	5	Language	5
American History	5	American History	5	Military Science	1
Survey of Education	1	Vocational Education	(501) 1	Physical Education	1
Military Science	1	Military Science	1	Hygiene	1
Physical Education	1	Physical Education	1	Elective	3

SECOND YEAR

Journalism	(401) 5	Journalism	(402) 5	Journalism	(501) 3
History	(401) 5	Military Science	1	Vocational Education	(507) 3
English (Literature)	5	Physical Education	1	Military Science	1
Military Science	1	†Elective	10	Physical Education	1
Physical Education	1			†Elective	8

THIRD YEAR

Journalism	(518) 5	Journalism	(502) 3	Prin. of Education	(485) 3
Prin. of Education	(401) 5	Elective	12	Psychology	(407) 5
Psychology	(401) 5			Elective	7
Journalism	(513) 3				

FOURTH YEAR

History of Education	(404) 3	History of Education	(405) 3	School Admin.	(601) 3
Prin. of Education	(410) 5	School Admin.	(600) 3	Journalism	(621) 3
Prin. of Education	(440) 5	Journalism	(622) 3	Vocational Education	(506) 2
Elective	4	Journalism	(517) 5	Vocational Education	(606) 3
		Elective	3	Elective	4

NOTE: The student is expected to offer a minor of 25 to 30 hours subject to the approval of the Head of the Department of Industrial Arts Education and the Secretary of the College.

* Students expecting to enter the field of journalism should enroll in the School of Journalism.

† At some time during his course the student must take 10 hours each of Economics, Political Science, and Sociology.

REQUIREMENTS FOR A DEGREE

Upon the satisfactory completion of one hundred and ninety Quarter-credit hours, under the restrictions and requirements prescribed above, the student will be recommended for the degree of Bachelor of Science in Education.

INDUSTRIAL ARTS EDUCATION

The offerings of this Department are designed to prepare men and women for positions as teachers, supervisors, and directors in the varied phases of Industrial Arts Education in elementary, junior, and senior high schools; or in the many similar positions now offered in industry.

In the public schools, Industrial Arts Education has become highly differentiated. No progressive school system is now content with "manual training" in a few simple exercises in woodwork and drawing. Modern schools generally are multiplying their offerings to include a variety of subjects in the arts of industry.

Despite this great variation in content, however, all lines and levels of this broad phase of education are based upon the same sound philosophy of orientation to our dominantly industrial-social organization. Moreover, within all of this diversity, there is much of knowledge and skills in common. Finally, Industrial Arts Education in all phases and at all levels provides participatory motivating means for fixating desirable personal-social behaviour through utilization of life-like situations.

These conditions make necessary for adequate teacher preparation in Industrial Arts Education not a specific, fixed curriculum, but rather a general, flexible curriculum, including

- I. Constants in
 - A. The general college curriculum (p. 39)
 1. Academic (pp. 35-36)
 2. Professional (pp. 36-37)
 3. Majors and minors (pp. 37-39)
 - B. State requirements for certification.
 - C. Basic principles and practice in Industrial Arts Education (pp. 138-142)
- II. Variables, consisting of content

- A. Majors within the department
 1. Practical Arts in Elementary Education
 2. Wood and cabinet work
 3. Metal work
 4. Drawing
 5. Electricity
 6. Ceramics
 7. Printing

- B. Electives, to constitute for each student a minor and to give desirable breadth of preparation beyond the selected major within the department.

The curriculum which follows is designed to meet the requirements noted above: hence lists only courses which are constants. After completing Industrial Arts 400, General Industrial Arts Laboratory, each student majoring in this department will select one among the various majors listed above for intensive preparation, supplemented by electives from other majors or fields. Among the variables—majors within the department and electives—students must secure departmental approval of their schedules each Quarter.

INDUSTRIAL ARTS EDUCATION

FIRST YEAR

Autumn Quarter		Winter Quarter		Spring Quarter	
Industrial Arts Edu.	(400) 5	Engineering		Botany or Zoology	(402) 5
Engineering		Drawing*	(436) 5	Psychology	(401) 5
Drawing*	(401) 4	Botany or Zoology	(401) 5	Physics††	(401) 5
English	(401) 5	English	(433) 5	or	
Survey of Education	1	Military Science		Elective	
Military Science	1	Physical Education		Military Science	1
Physical Education	1			Physical Education	1
Hygiene	1				

* In majors 1, 6, and 7, students may substitute for the Engineering Drawing courses prescribed here Fine and Ceramic Arts courses approved by the Department of Industrial Arts Education.

†† Physics, not chemistry, is required of students who present no high school credits in either physics or chemistry.

SECOND YEAR

Autumn Quarter		Winter Quarter		Spring Quarter	
Psychology	(407) 5	American History or		Principles of	
American History or		Economics		Education	(401) 5
Economics	5	Physics††	(402) }	Industrial Arts Edu.	(450) 3
Language	5	or		Language	5
or		Elective		or	
Elective	6	Language		Elective	3 or 8
Military Science	1	or		Military Science	1
		Elective			
		Military Science			

THIRD YEAR

Industrial Arts Edu. **	(600) 3	Industrial Arts Edu.	(430) 3	Vocational Education †	(606) 3
Industrial Arts Edu.	(452) 3	History of Education	(607) 2	History of Education	(405) 3
School		School		Elective	11
Administration	(600) 3	Administration	(601) 3		
Elective	8	Elective	9		

FOURTH YEAR

Industrial Arts Edu. **	(600) 3	Industrial Arts Edu.	(685) 3	Prin. of Education	(410) 5
Elective	14	Elective	14	Prin. of Education	(440) 5
				Elective	7

** Industrial Arts Education 600 is required of all men students in the College of Education and of all students majoring in this department in their Junior year; it may be elected any Quarter.

† In major 1, Practical Arts in the Elementary School, women students will substitute Industrial Arts Education 623 for Vocational Education 606 shown in the curriculum.

†† Physics, not chemistry, is required of students who present no high school credits in either physics or chemistry.

NOTE: In addition to major courses indicated, students in Industrial Arts Education must supplement their major courses by non-professional electives to make a total of 50 Quarter-credit hours in this group. They must also offer a minor of from 25 to 30 Quarter-credit hours.

REQUIREMENTS FOR A DEGREE

Upon the satisfactory completion of one hundred and ninety Quarter-credit hours, under the restrictions and requirements prescribed above, the student will be recommended for the degree of Bachelor of Science in Education.

INDUSTRIAL ARTS EDUCATION

For a major in Industrial Arts Education, see sequence of courses on page 56.

CURRICULUM FOR TEACHERS, SUPERVISORS, AND PRINCIPALS
IN ELEMENTARY SCHOOLS

FIRST YEAR

Autumn Quarter		Winter Quarter		Spring Quarter	
Biological Science	5	Biological Science		Psychology	(401) 5
Social Science	5	Social Science		English	(401) 5
Foreign Language		Foreign Language		Foreign Language	
or Elective	5	or Elective		or Elective	5
Survey of Education		Military Science		Military Science	1
Military Science	1	Physical Education		Hygiene	(400) 1
Physical Education	1			Physical Education	1

SECOND YEAR

Autumn Quarter		Winter Quarter		Spring Quarter	
Psychology	(407) 5	English (433, 441, 442,	Prin. of Education (401) 5		
Military Science	1	or 446)	5 Military Science	1	
Physical Edu. (Women)	1	Military Science	1 Physical Edu. (Women)	1	
Elective	10	Physical Edu. (Women)	1 Elective	10	
		Elective	10		

THIRD YEAR

Music	(447) 2	Prin. of Education	(494) 3	Music	(448) 3
Prin. of Education	(492) 3	Elective	12	Elective	12
Prin. of Education	(493) 3				
Prin. of Education	(495) 3				
History of Education	(401) 5				

NOTE: Not later than the beginning of the third year, students who are pursuing this curriculum and who expect to be teachers or supervisors in the elementary schools must file a statement to that effect in the office of the Secretary of the College of Education. Students are required to select nine hours from Principles of Education 492, 493, 494, and 495 through consultation with the instructor. Students preparing to teach in the primary grades will be required to include Principles of Education 495 in their elective course offering.

FOURTH YEAR

School Admin.	(600) 3	School Admin.	(601) 3	Prin. of Education (430) 5
Elective	12	Elective	12	Prin. of Education (441) 10

THIRD AND FOURTH YEAR ELECTIVES

Electives must be so chosen as, when combined with required work, to offer a major consisting of 45 to 50 Quarter-credit hours in one field, and a minor consisting of 25 to 30 credit hours in another field. In meeting the major and minor requirements, students may, with the consent of the Department of Principles and Practice of Education and the Dean of the College of Education, combine courses from two or more related fields.

Principles of Education 401, 430, 441, 492, 493, and 494 must be taken by all students. Principles of Education 304, 305, and 306, offered only in the Summer Quarter, will be allowed as subject-credit for 492, 493, and 494, respectively.

REQUIREMENTS FOR A DEGREE

Upon the satisfactory completion of one hundred and ninety Quarter-credit hours, under the restrictions and requirements prescribed above, the student will be recommended for the degree of Bachelor of Science in Education.

PHYSICAL EDUCATION—MEN

NOTE: The purpose of this curriculum is the preparation of teachers of physical education, athletic coaches, recreation directors, city and state supervisors, Y.M.C.A. and Y.W.C.A. physical directors, and persons for various other types of positions that are open to men and women trained in this field. All students taking Physical Education as a major or minor must have their schedules approved by their adviser in the Department of Physical Education each Quarter.

COLLEGE OF EDUCATION

FIRST YEAR

Autumn Quarter		Winter Quarter		Spring Quarter	
Zoology	(401) 5	Anatomy	(414) 5	English	(401) 5
Chemistry	(401 or 411) 5	Chemistry	(402 or 412) 5	Psychology	(401) 5
Survey of Education	1	*Foreign Language		*Foreign Language	
Physical Education	(401) 1	or Elective	5	or Elective	5
Military Science	1	Physical Education	(402) 1	Hygiene	(400) 1
Elective	5	Military Science	1	Physical Education	(403) 1
				Military Science	1

*Students who have credit for two units of some one foreign language taken in high school are not required to take any foreign language in college. Students who enter with less than this amount must take a minimum of three Quarters of one foreign language in college.

SECOND YEAR

Psychology	(407) 5	English (433, 441, 442,		Anatomy	(412) 5
Physiology	(407) 5	or 446)	5	Prin. of Education	(401) 5
Physical Education	(441) 2	Physiology (408 or 409)	5	Physical Education	(443) 2
Military Science	1	Physical Education (442)	2	Military Science	1
Elective	2	Military Science	1	Elective	2
		Elective	2		

THIRD YEAR

History of Education	(404) 3	History of Education	(405) 3	Public Speaking	(401) 5
Sociology	(401) 5	Sociology	(402) 5	Physical Education	(447) 3
Physical Education	(681) 3	Physical Education	(683) 5	Physical Education	(493) 3
Physical Education	(445) 3	Physical Education	(446) 3	Elective	4
Elective	2				

FOURTH YEAR

Physical Education	(685) 3	Physical Education	(692) 3	Physical Education	(451) 3
Physical Education	(449) 3	Physical Education	(450) 3	Prin. of Education	(440) 5
School Admin.	(600) 3	Physical Education	(682) 5	Elective	7
Elective	6	Elective	5		

NOTE: Students who desire to major in Physical Education should consult with the Head of the Department of Physical Education, Men's Gymnasium, before registering.

REQUIREMENTS FOR A DEGREE

Upon the satisfactory completion of one hundred and ninety Quarter-credit hours, under the restrictions and requirements prescribed above, the student will be recommended for the degree of Bachelor of Science in Education.

PHYSICAL EDUCATION—WOMEN

FIRST YEAR

Autumn Quarter		Winter Quarter		Spring Quarter	
Zoology	(401) 5	Anatomy	(414) 5	English	(401) 5
Chemistry	(401 or 411) 5	Chemistry	(402 or 412) 5	Psychology	(401) 5
Survey of Education	1	*Foreign Language		*Foreign Language	
Physical Education	(421) 1	or Elective	5	or Elective	5
Elective	5	Physical Education	(422) 1	Hygiene	(400) 1
				Physical Education	(423) 1

*Students who have credit for two units of some one foreign language taken in high school are not required to take any foreign language in college. Students who enter with less than this amount must take a minimum of three Quarters of one foreign language in college.

SECOND YEAR

Autumn Quarter		Winter Quarter		Spring Quarter	
Psychology	(407) 5	English (433, 441, 442,		Anatomy	(412) 5
Physiology	(407) 5	or 446)	5	Prin. of Education	(401) 5
Physical Education	(541) 3	Physiology (408 or 409)	5	Physical Education	(543) 3
Physical Education	(425) 1	Physical Education (542)	3	Physical Education	(427) 1
Elective	2	Physical Education (426)	1	Elective	2
		Elective	2		

THIRD YEAR

History of Education	(404) 3	History of Education	(405) 3	Public Speaking	(401) 5
Sociology	(401) 5	Sociology	(402) 5	Physical Education	(493) 3
Physical Education	(691) 3	Physical Education	(683) 5	Physical Education	(547) 3
Physical Education	(545) 3	Physical Education	(546) 3	Elective	3
Elective	2				

FOURTH YEAR

Physical Education	(671) 3	Physical Education	(692) 3	Physical Education	(551) 3
Physical Education	(549) 3	Physical Education	(550) 3	Prin. of Education	(440) 5
School Admin.	(600) 3	Physical Education	(682) 5	Elective	7
Elective	6	Elective	5		

NOTE: Students who desire to major in Physical Education should consult with Mrs. Lydia Clark Benedict, Pomerene Hall, before registering.

REQUIREMENTS FOR A DEGREE

Upon the satisfactory completion of one hundred and ninety Quarter-credit hours, under the restrictions and requirements prescribed above, the student will be recommended for the degree of Bachelor of Science in Education.

EDUCATION-SCIENCE NURSING

NOTE: The purpose of this curriculum is the preparation of school nurses and teachers in schools of nursing. Graduates are eligible for the State Medical Board examinations for registration in Ohio. During the time devoted to nursing practice maintenance is furnished, free of charge, by the College of Medicine.

FIRST YEAR

Autumn Quarter		Winter Quarter		Spring Quarter	
Chemistry (401 or 411)	5	Chemistry (402 or 412)	5	Public Health	(406) 1
Elementary or General		Elementary or General		Home Economics	(411) 5
English	(401) 5	Psychology	(401) 5	Foods	
Public Health	(404) 2	Physical Education	(422) 1	Anatomy	(410) 3
Elective	2	Hygiene	(400) 1	Visceral	
Survey of Education	1	Elective	5	Physical Education	(423) 1
Physical Education	(421) 1			Elective	7

Summer Quarter

*Science Nursing	(501) 8
Ward Duty, Drugs and Solutions	
Science Nursing	(502) 8
Ward Duty	

* All courses in Science Nursing, 501 to 514 inclusive, are given at the University hospital.

COLLEGE OF EDUCATION

SECOND YEAR

Autumn Quarter	Winter Quarter	Spring Quarter
Bacteriology (607) 5	Bacteriology (608) 3	Psychology (402) 5
General Bacteriology	Pathogenic Bacteriology	History of Education (404) 3
Physiology (407) 5	Physiology (408 or 409) 5	†Foreign Language
†Foreign Language	English (433) (441)	or Elective 5
or Elective 5	(442) or (446) 5	Physical Education (427) 1
Physical Education (425) 1	†Foreign Language	Elective 5
	or Elective 5	
	Physical Education (426) 1	
	Summer Quarter	
	Science Nursing (503) 16	
	Ward Duty	

† Students who have credit for two units of some one foreign language taken in high school are not required to take any foreign language in college. Students who enter with less than this amount must take a minimum of three Quarters of one foreign language in college.

THIRD YEAR

Autumn Quarter	Winter Quarter	Spring Quarter
History of Education (405) 3	Science Nursing (504) 1	Psychology (407) 5
School Admin. (600) 3	Elementary Pathology	Educational Psychology
Public Speaking (401) 5	Science Nursing (505) 4	Prin. of Education (401) 5
Sociology (401) 5	Medical Nursing and	Sociology (402) 5
	Materia Medica	School Admin. (601) 3
	Science Nursing (506) 4	
	Surgical Nursing and	
	Operating Room	
	Technic	
	Science Nursing (507) 3	
	Ward Duty	
	Summer Quarter	
	Science Nursing (508) 16	
	Ward Duty	

FOURTH YEAR

Autumn Quarter	Winter Quarter	Spring Quarter
Science Nursing (509) 3	Science Nursing (513) 16	Public Health (602) 3
Gynecological and	Ward Duty	Public Health
Obstetrical Nursing		Problems
Science Nursing (510) 3		Public Health (403) 2
Orthopedic and		Prin. of Education (770) 3
Child Nursing		Teaching of Nursing
Science Nursing (511) 3		Prin. of Education (440) 5
Communicable Diseases		Elective 2
and Special Senses		
Nursing		
Science Nursing (512) 3		
Ward Duty		
	Summer Quarter	
	Science Nursing (514) 16	
	Ward Duty	

FIFTH YEAR

The work of the fifth year will cover three Quarters and will be divided between the University Hospital School for Nurses and the University. In the last Quarter the student must include courses to make a total of fifty professional hours in the College of Education.

REQUIREMENTS FOR A DEGREE

Upon the satisfactory completion of two hundred and eighty-five Quarter-credit hours, under the restrictions and requirements prescribed above, the student will be recommended for the degree of Bachelor of Science in Education and for a diploma in Nursing.

VOCATIONAL EDUCATION

*(Teachers of Academic Subjects in Continuation Schools)

Autumn Quarter		FIRST YEAR		Spring Quarter	
English	(401) 5	History	(403) 5	History	(404) 5
Mathematics	(421) 5	Mathematics	(422) 5	Mathematics	(423) 5
Engr. Drawing	5	Psychology	(401) 5	Psychology	(402) 5
Survey of Education	1	Hygiene	(400) 1	Military Science	1
Military Science	1	Military Science	1	Physical Education	1
Physical Education	1	Physical Education	1		

		SECOND YEAR			
English	(433) 5	Economics	(401) 5	Economics	(402) 5
Physics	(401 or 403) 5	Physics	(402 or 404) 5	Political Science	(401) 5
or		or		Psychology	(407) 5
Chemistry	(401 or 411) 5	Chemistry	(402 or 412) 5	Military Science	1
Geography	(401) 5	Geography	(403) 5	Physical Edu. (Women)	1
Military Science	1	Military Science	1		
Physical Edu. (Women)	1	Physical Edu. (Women)	1		

		THIRD YEAR			
Physiology	(407) 5	Physiology	(408 or 409) 5	Prin. of Education	(401) 5
Economics	(637) 3	Political Science	(403) 5	Vocational Education	(506) 2
History of Education	(404) 3	History of Education	(405) 3	School Admin.	(600) 3
Elective	5	Elective	5	Elective	5

		FOURTH YEAR			
Sociology	(401) 5	Sociology	(402) 5	School Admin.	(601) 3
Economics	3	Economics	3	Economics	3
Elective	8	Elective	5	Prin. of Edu.	(440) 5
		Vocational Education	(602) 2	Elective	5

NOTE: The purpose of the above curriculum is to prepare candidates to teach academic subjects in part-time (continuation) schools and classes. Before candidates will be granted a degree they must furnish satisfactory evidence of having had at least one year of practical experience in either industrial or commercial pursuits.

REQUIREMENTS FOR A DEGREE

Upon the satisfactory completion of one hundred and ninety Quarter-credit hours, under the restrictions and requirements prescribed above, the student will be recommended for the degree of Bachelor of Science in Education.

* For a sequence of courses for teachers of shop and related subjects in vocational schools, see pages 56-57.

CURRICULUM LEADING TO THE DEGREE OF BACHELOR OF CERAMIC ART

The work in this curriculum is offered under the supervision of the Department of Fine Arts. For this reason the degree is conferred by the College of Education in which the department is administered.

The curriculum of Ceramic Art is planned to equip artists with a working knowledge of ceramic technology. The essential practical processes used in manufacturing pottery and porcelain products are included and the arrangement of laboratory courses permits sufficient concentration to meet the demand for highly specialized artists in the various ceramic fields.

FIRST YEAR

Autumn Quarter		Winter Quarter		Spring Quarter	
Engineering Drawing (401)	4	Engineering Drawing (402)	4	Fine Arts (421)	5
Principles		Principles		Freehand Drawing	
English (401)	5	Ceramic Engineering (401)	4	Mathematics (431)	5
Composition and Reading		Occurrence and Properties of Clays		Plane Trigonometry	
Chemistry (401 or 411)	5	Chemistry (402 or 412)	5	Chemistry (403 or 413)	5
Elementary or General		Elementary or General		Qualitative Analysis	
Military Science	1	Military Science	1	Military Science	1
Physical Education	1	Physical Education	1	Hygiene (400)	1
				Physical Education	1

SECOND YEAR

Fine Arts (451)	5	Fine Arts (452)	5	Fine Arts (453)	5
History		History		History	
Fine Arts (423)	5	Fine Arts (431)	5	Fine Arts (432)	5
Advanced Freehand Drawing		Design		Design	
Mathematics (432)	5	Ceramic Engineering (605)	4	Ceramic Engineering (405)	4
College Algebra		Bodies, Glazes, and Colors		Winning, Preparation and Forming	
Military Science	1	Military Science	1	Military Science	1
Physical Edu. (Women)	1	Physical Edu. (Women)	1	Physical Edu. (Women)	1

Summer Quarter: Industrial Experience

THIRD YEAR

Fine Arts (441)	5	Fine Arts (434)	5	Fine Arts (424)	5
Water Color		Thesis Design		Life Drawing	
Fine Arts (461)	5	Fine Arts (462)	5	Fine Arts (467)	3
Modeling		Modeling		Technical Problems	
Fine Arts (465)	3	Fine Arts (466)	3	Fine Arts (482)	5
Technical Problems		Technical Problems		Ceramic Art	
Fine Arts (480)	5	Fine Arts (481)	5	Fine Arts (483)	5
Ceramic Art		Ceramic Art		Ceramic Art	

Summer Quarter: Industrial Experience

FOURTH YEAR

Fine Arts (657)	5	Fine Arts (658)	5	Fine Arts (659)	5
Proseminary		Proseminary		Proseminary	
Fine Arts (661)	3	Fine Arts (662)	3	Fine Arts (663)	3
Advanced Technical Problems		Advanced Technical Problems		Advanced Technical Problems	
Fine Arts (484)	5	Fine Arts (485)	5	Fine Arts (486)	5
Ceramic Art		Ceramic Art		Ceramic Art	
Elective	5	Elective	5	Elective	5

CURRICULUM LEADING TO THE DEGREE OF BACHELOR OF LANDSCAPE ARCHITECTURE

The work in this curriculum is offered under the supervision of the Department of Fine Arts. For this reason the degree is conferred by the College of Education in which the department is administered.

The curriculum in Landscape Architecture is designed to give the student who intends to become a professional landscape architect, training in the application of the principles of design and the technical knowledge necessary to carry out his work.

FIRST YEAR

Autumn Quarter		Winter Quarter		Spring Quarter	
English	(410) 3	English	(411) 3	English	(412) 3
Composition		Composition		Composition	
Mathematics	(431) 5	Mathematics	(432) 5	Engineering Drawing	(429) 5
Plane Trigonometry		College Algebra		Projection Drawing	
Botany	(401) 5	Geology	(401) 5	Botany	(402) 5
General		General		General	
Fine Arts	(401) 2	Fine Arts	(402) 2	Fine Arts	(403) 2
Freehand Drawing		Freehand Drawing		Freehand Drawing	
Military Science	1	Military Science	1	Military Science	1
Physical Education	1	Physical Education	1	Hygiene	(400) 1
				Physical Education	1

SECOND YEAR

Architecture	(420) 8	Architecture	(402) 3	Architecture	(403) 3
Elements		Perspective		Composition	
Fine Arts	(451) 5	Architecture	(422) 5	Architecture	(423) 5
History		Order Problems		Order Problems	
Fine Arts	(404) 2	Fine Arts	(452) 5	Fine Arts	(453) 5
Charcoal		History		History	
Fine Arts	(521) 2	Fine Arts	(405) 2	Fine Arts	(407) 2
Plant Materials		Charcoal		Water Color	
Military Science	1	Fine Arts	(510) 2	Fine Arts	(522) 2
Physical Edu. (Women)	1	Theory of Landscape Design		Plant Materials	
		Military Science	1	Military Science	1
		Physical Edu. (Women)	1	Physical Edu. (Women)	1

THIRD YEAR

Fine Arts	(511) 5	Fine Arts	(512) 5	Fine Arts	(513) 5
Elementary Landscape Design		Intermediate Landscape Design		Intermediate Landscape Design	
Civil Engineering	(412) 5	Fine Arts	(411) 3	Fine Arts	(412) 3
Surveying		Life Drawing		Life Drawing	
Fine Arts	(408) 3	Fine Arts	(524) 2	Horticulture	(445) 5
Water Color		Plant Materials		Garden Flowers	
Fine Arts	(523) 2	Elective	8	Fine Arts	(525) 2
Plant Materials				Plant Materials	
Fine Arts	(530) 3			Elective	3
History of Landscape Architecture					

FOURTH YEAR

Autumn Quarter		Winter Quarter		Spring Quarter	
Fine Arts	(465) 3	Fine Arts	(466) 3	Fine Arts	(467) 3
Technical Problems:		Technical Problems:		Technical Problems:	
Planting Design		Planting Design		Planting Design	
Fine Arts	(514) 5	Fine Arts	(515) 5	Fine Arts	(516) 5
Advanced Landscape Design		Advanced Landscape Design		Advanced Landscape Design	
Fine Arts	(661) 5	Fine Arts	(662) 5	Fine Arts	(663) 5
Advanced Technical Problems		Advanced Technical Problems		Advanced Technical Problems.	

SEQUENCE OF COURSES FOR MAJORS AND MINORS

MAJOR IN INDUSTRIAL ARTS EDUCATION

A suggested sequence of courses for students of the College of Education majoring in Industrial Arts Education:

FIRST YEAR: Industrial Arts Education 400; Engineering Drawing 401*, 436*

SECOND YEAR: Major content courses and electives; Industrial Arts Education 450.

THIRD YEAR: Major content courses and electives; and Industrial Arts Education 430, 452, 600.

FOURTH YEAR: Major content courses and electives; and Industrial Arts Education 606, 685.

Major courses are as follows:

1. 541. Practical Arts Laboratory for teachers in elementary schools.
2. 409-411-413. Wood and Cabinet work; and Industrial Engineering 411.
3. (Metal Work) Industrial Engineering 405, 407, 411, 416, 419, 421.
4. (Drawing)
5. (Electricity)
6. (Ceramics)
7. (Printing)

Courses and sequences prescribed by conference between candidate and Department of Industrial Arts Education.

* See footnote, 1, to curriculum of Industrial Arts Education on p. 47.

MINOR IN INDUSTRIAL ARTS EDUCATION

Men and women planning to minor in Industrial Arts Education will first consult with the department concerning selections and sequence of courses.

MAJOR IN VOCATIONAL EDUCATION

(For Students who wish to teach Shop Subjects in Vocational Industrial Schools)

Students who are majoring in Vocational Education ** must include the following courses in their elections. While rigid adherence to the

** This does not have reference to students who are preparing to become teachers of commercial subjects or of academic subjects in part-time (general continuation) schools. (See page 53.)

order in which the subjects appear here will not be required, the order should be followed as closely as possible.

Industrial Arts Education	(409) 5	Industrial Engineering	(416) 3
Industrial Arts Education	(411) 5	Industrial Engineering	(407) 2
Engineering Drawing	(436) 5	Industrial Engineering	(419) 3
Industrial Engineering	(405) 3	Vocational Education	(506) 2
		Vocational Education	(510) 3

In addition to the foregoing, students must elect at least fifteen hours from the following:

Industrial Arts Education	(413) 5	Industrial Engineering	(421) 3
Industrial Arts Education	(450) 3	Industrial Engineering	(623) 3
Industrial Engineering	(408) 2	Vocational Education	(504) 2
Industrial Engineering	(415) 3		

NOTE: Students in Vocational Education must also secure credit for Vocational Education 502, 511, and 512, which will be counted as part of the fifty hours of professional work required of students in the College of Education.

MINOR IN MUSIC

The following sequence is recommended to fulfill the requirements of a minor in school music:

Music 476, 478, 479, 482, 483	10 hours
Music 430, 431	8 hours
Music 442, 443	6 hours
Music 460, 461	6 hours

In addition to the courses above, students minoring in school music must have a degree of proficiency in singing and in piano playing satisfactory to the department.

Students completing a four-year course with a minor in school music are not eligible to supervise music or to teach music in high school. They may, however, teach in the public schools under the direction of a supervisor or may teach non-credit music courses in high schools.

Students may also choose a minor in music looking toward a cultural broadening and not toward preparation for teaching. The following courses are suggested:

Music 430, 431, 601, 603	16 hours
Music 476, 478	4 hours
Music 460, 461, 462	9 hours

It is recommended that work in applied music be taken also.

MINOR IN PHYSICAL EDUCATION

NOTE: Students planning to minor in Physical Education should first consult with the department. Men should see the head of the department of Physical Education, at the Men's Gymnasium. Women should see the head of the department of Physical Education, at Pomerene Hall.

MEN

A suggested sequence of courses for students planning to teach Physical Education in elementary and secondary schools:

SECOND YEAR: Physical Education 441, 442
 THIRD YEAR: Physical Education 445, 683, 691
 FOURTH YEAR: Physical Education 682, 692

A suggested sequence of courses for students planning to coach athletics in connection with other teaching:

SECOND YEAR: Physical Education 443

THIRD YEAR: Physical Education 446, 447, 683

FOURTH YEAR: Physical Education 449, 682, 685, 692

NOTE: Prerequisites for all students who minor in Physical Education are: one unit of high school chemistry or Chemistry 401-402, and Physiology 401-402.

WOMEN

Students planning to minor in Physical Education preparatory to teaching in the elementary and secondary schools should take the following sequence:

FIRST YEAR: Chemistry 401-402 or 411-412

SECOND YEAR: Physical Education 541, 542, 543
Physiology 407-408-409

THIRD YEAR: Physical Education 545, 683, and 547 or 551

FOURTH YEAR: Physical Education 692, 682

Those wishing to teach in colleges should take the following sequence:

FIRST YEAR: Chemistry 401-402 or 411-412

SECOND YEAR: Physical Education 541, 542
Physiology 407-408-409

THIRD YEAR: Physical Education 545, 546, 547, 683

FOURTH YEAR: Physical Education 550, 692, 682

Students wishing to supervise Community Recreation work should take the following:

FIRST YEAR: Chemistry 401-402 or 411-412

SECOND YEAR: Physical Education 541, 542, 543
Physiology 407-408-409

THIRD YEAR: Physical Education 550, 551, 683

FOURTH YEAR: Physical Education 692, 682

NOTE: Chemistry 401-402 or 411-412 and Physiology 407-408-409 are prerequisites for the minor.

MAJOR IN THE BIOLOGICAL SCIENCES

A suggested sequence of courses in biological sciences for students in the College of Education majoring in the biological sciences:

FIRST YEAR: Zoology 401-402, 403 or Botany 401-402, 405.

SECOND YEAR: Botany 401-402, 405 or Zoology 401-402, 403

THIRD YEAR: Physiology 407, 408, Principles of Education 705

FOURTH YEAR: Zoology 615-616, or Botany 415-416, Entomology 451 or Botany 423

NOTE: Chemistry 401-402 or 411-412 should be taken sometime during the first two years as essential to the understanding of biological processes.

CURRICULUM RECOMMENDED FOR STUDENTS MAJORING IN CHEMISTRY

The following curriculum is recommended for students majoring in Chemistry. The courses in Chemistry as specified will fulfill the requirements of a major in Chemistry.

FIRST YEAR

Autumn Quarter		Winter Quarter		Spring Quarter	
Social Science	5	Social Science	5	Psychology	(401) 5
Chemistry (401 or 411)	5	Chemistry (402 or 412)	5	English	(401) 5
Elective	5	Elective	5	Chemistry (403 or 413)	5
Military Science	1	Military Science	1	Military Science	1
Physical Education	1	Physical Education	1	Physical Education	1
Survey of Education	1			Hygiene	1

SECOND YEAR

Psychology	(407) 5	English (433, 441, 442 or 446)	5	Prin. of Education	(401) 5
Chemistry	(441) 3			Mathematics	(423) 5
Chemistry	(444) 2	Chemistry	(442) 3	Elective	5
Mathematics	(421) 5	Chemistry	(445) 2	Military Science or	
Military Science or		Mathematics	(422) 5	Physical Education	1
Physical Education	1	Military Science or			
		Physical Education	1		

THIRD YEAR

History of Education (404)	3	History of Education (405)	3	Physical Chemistry	(460) 5
Physics (401 or 403)	5	Physics (402 or 404)	5	Chemistry	(672) 3
*Elective	7 to 10	Elective	7 to 10	Elective	7 to 10

FOURTH YEAR

**Prin. of Education	(660) 4	Chemistry	(415) 3	Prin. of Education	(440) 5
School Admin.	(600) 3	Physics	5	Prin. of Education	(410) 5
Physics	5	School		Prin. of Education	(710) 3
Ind. Arts Edu.	(600) 3	Administration	(601) 3	Elective	3
		***Elective	4 to 7		

* Must include foreign language if requirements not met.

** Student may elect Principles of Education 661 in Winter Quarter instead of 660.

*** Not more than half of elective to be in field of Chemistry and Physics.

The foregoing curriculum includes a minor in Physics and Mathematics. No other minor is required.

REQUIREMENT FOR A DEGREE

Upon satisfactory completion of one hundred and ninety Quarter-credit hours under the restrictions and requirements prescribed above, the student will be recommended for the degree of Bachelor of Science in Education.

MAJOR IN GEOGRAPHY

A suggested sequence of courses for students planning to teach geography in the elementary and secondary schools.† This sequence in geography is arranged so that the student may take two or more courses in geology and one in botany, counting them as part of the geography sequence.

FIRST YEAR: Geography 401, 403, Geology 420

SECOND YEAR: Geology 401, Geography 411, 422, 603 or Botany 423

THIRD YEAR: Geography 621 or 623, 624, 631

FOURTH YEAR: Geography 604, 632, 661, 642

† Students preparing to teach commercial geography should take the special curriculum, page 46.

MINOR IN GEOGRAPHY

The following sequence of courses is recommended for students wishing to take a minor in geography: Geography 401, 403, 411, 422, 605, 621, 623.

MAJOR IN ENGLISH

A suggested sequence of courses in English for students of the *College of Education majoring in English*:

FIRST YEAR: English 401, 433, Public Speaking 401, 402, 407

SECOND YEAR: English 441, 442, 446, 405, 407, 427, 429, 428, 636, Public Speaking 401 or 407.

THIRD YEAR: English 636, 639, 643, 651, 652, 653, 657, 658, 659, Public Speaking 414, 459, Principles of Education 715

FOURTH YEAR: English 654, 655, 656, 658, 667, 670, 672, Public Speaking 421, 625

MAJOR IN GERMAN

A suggested sequence of courses in German for students of the *College of Education majoring in German*:

FIRST YEAR: German 401, 402, 403

SECOND YEAR: German 404 or 406, Advanced German (ten hours)

THIRD YEAR: Proseminary in German Literature (three hours each Quarter), 655

NOTE: At least two Quarters in History of Philosophy and one Quarter in Advanced English Literature.

FOURTH YEAR: Proseminary in German Literature (three hours), Principles of Education 725 (Teaching of German), German 685, 675

NOTE: Recommended additional—Introduction to Study of Language (one Quarter), and Advanced English Literature (one Quarter).

MAJOR IN HISTORY

Sequence of courses in history and allied subjects for students of the *College of Education majoring in history*:

FIRST YEAR: History 401-402, or 403-404 (required)

SECOND YEAR: History 405-406, or 401-402 (required); Political Science 401, and either 402 or 403 (required); Fine Arts 451 or 452 or 453 or 454 (elective); Geography 401 (elective)

THIRD AND FOURTH YEARS: History, twenty hours (required) in one of the following fields: Ancient and medieval history, modern history, or American history. Principles of Education 663, or 700 (required).

RECOMMENDED ELECTIONS

Economics 401 and 402, or 407 (elective); Fine Arts 476 and 477 (elective); Philosophy 601 or 602 or 603 or 605 (elective); Sociology 401 (elective).

MINOR IN HISTORY

A suggested sequence of courses for students of the *College of Education minoring in history*:

History	(401) 5	History	(403 or 405) 5
History	(402) 5	History	(404 or 406) 5

Five additional hours in history.

NOTE: Students minoring in history are required to take either Principles of Education 700 or 663, in addition to twenty-five hours in history.

MAJOR IN THE SOCIAL STUDIES

Students whose primary interest is in economics, political science or sociology and who wish to do supervised teaching will not be allowed to count more than twenty hours of these subjects toward a major in the social studies. The remaining thirty hours must be in history, including History 401, 402, 403, and 404 or their equivalents.

MINOR: THE VISITING TEACHER

The following sequence of courses in Sociology is recommended as a minor for students in the College of Education interested in the work of the visiting teacher:

Sociology	(401) 5	Sociology	(668) 5
Sociology	(402) 5	Sociology	(695) 3
Sociology	(620) 3		

And one course selected from the following four: 607, 619, 625, 656—total 25 hours.

MAJOR IN LATIN

A suggested sequence of courses in Latin for students of the College of Education majoring in Latin:

FIRST YEAR: Latin 401-402-403 or Latin 406-407-408

SECOND YEAR: Latin 501 or 507; 504; 408, 506, 508 or 602.

THIRD YEAR: Latin 503, 507, 615, or Principles of Education 730 (Methods of Teaching Latin); Latin 504 or 612; 506, 508, 602, 609, 611, 613, or 616

NOTE: Students who elect more than one course in a given Quarter should distribute their courses between the three types of work: reading courses, lecture courses, professional work.

FOURTH YEAR: Latin 503, 507, 615, or Principles of Education 730 (Methods of Teaching Latin); Latin 504 or 612; 506, 508, 602, 609, 611, 613, or 616

NOTE: Students who elect more than one course in a given Quarter should distribute their courses between the three types of work: reading courses, lecture courses, professional work.

CURRICULUM RECOMMENDED FOR STUDENTS MAJORING IN MATHEMATICS AND PHYSICS

The following curriculum is arranged for students who are preparing to teach both mathematics and physics or for students who wish to major in physics with a view to teaching it. In the secondary schools as ordinarily organized teachers are frequently asked to teach both mathematics and physics and it is well to combine a preparation in these subjects. The mathematics contained in this curriculum is for the most part essential to an understanding of physics beyond a first general course. On the other hand, a clear understanding of the basic principles of physics is of great value in teaching mathematics because physics furnishes a wealth of material for the illustration of mathematical processes and supplements the discipline of a mathematical training. In fact, mathematics and physics reinforce each other in so many ways that it is extremely important for the teacher of either subject to have a good understanding of both. The completion of this curriculum leaves the student in excellent condition to carry forward graduate work in either mathematics or physics.

FIRST YEAR

Autumn Quarter		Winter Quarter		Spring Quarter	
Chemistry	(401 or 411) 5	Chemistry	(402 or 412) 5	Psychology	(401) 5
Social Science	5	Social Science	5	English	(401) 5
Foreign Language		Foreign Language		Foreign Language	
or	5	or	5	or	5
Mathematics	(421 or 431)	Mathematics	(422 or 432)	Mathematics	(423 or 433)
Survey of Education	1	Military Science	1	Military Science	1
Military Science	1	Physical Education	1	Physical Education	1
Physical Education	1			Hygiene	(400) 1

SECOND YEAR

Autumn Quarter		Winter Quarter		Spring Quarter	
Psychology	(407) 5	English (433, 441, 442		Prin. of Education	(401) 5
Mathematics	(441)	or 446)	5	Elective	
or	5	Mathematics	(442)	or	5
Mathematics	(421 or 431)	or	5	Mathematics	(423 or 433)
Physics	(401 or 403)	Mathematics	(422 or 432)	Physics	(409)
or	5	Physics	(402 or 404)	or	5
Elective		or	5	Elective	
Military Science	1	Elective		Military Science	1
Physical Education	1	Military Science	1	Physical Education	1
(Women)		Physical Education	1	(Women)	
		(Women)			

THIRD YEAR

History of Edu.	(404) 3	History of Edu.	(405) 3	Special Methods	3
Elective		Elective		Elective	
or	5	or	5	or	5
Physics	(401 or 403)	Physics	(402 or 404)	Physics	(409)
Mathematics	(441)	Mathematics	(442)	Physics	(616)
or	5	or	5	or	5
Elective		Elective		Elective	
Ind. Arts Edu.	(600) 3	Elective	3	Elective	3
(Men)					

FOURTH YEAR

*Prin of Education	(660) 4	School Admin.	(600) 3	School Admin.	(601) 3
Mathematics	(641) 5	Mathematics	(621) 5	Prin. of Education	(440) 5
Physics	(609) 4	Physics	(608) 4	Prin. of Education	(410) 5
Physics	(616)	Elective	3 or 5	Physics	(607) 4
or	3				
Elective					

* Students may elect Principles of Education 661 in the Spring Quarter instead of 660.

(1) Students taking foreign language in the first year must elect Mathematics 421, 422 and 423 or Mathematics 431, 432 and 433 in the second year.

(2) In addition to these prescribed courses in the professional subjects the student must elect enough additional professional work to make a total of fifty Quarter-credit hours.

(3) The courses in Mathematics and Physics and related subjects specified by this curriculum will be considered as fulfilling the requirements for both major and minor.

REQUIREMENTS FOR A DEGREE

Upon satisfactory completion of one hundred and ninety Quarter-credit hours under the restrictions and requirements prescribed above, the student will be recommended for the degree of Bachelor of Science in Education.

MAJOR IN PSYCHOLOGY

The following sequence of courses is suggested for those who may wish to major in Psychology, as preparation for psychological work in the schools:

FIRST YEAR: Psychology 401 (required, College of Education)

SECOND YEAR: Psychology 407 (required, College of Education)

THIRD YEAR: Psychology 662, 611, 610, 616

FOURTH YEAR: Psychology 650, (year), 609, 615, 651, 652, 640.

NOTE: It is strongly urged that students contemplating such a course consult with the department, as early as possible, with regard to other electives and the choice of a minor subject.

MAJOR IN FRENCH OR SPANISH**(Romance Languages)**

Sequences in either of the Romance Languages should be selected in accordance with the following suggestions:

French 401-402, 403-404 must precede all other courses in French except 405-406.

The undergraduate courses offered in French and Spanish beginning with third-year collegiate work fall into two general groups:

I. Literary—French 413-414, 601-602, 605, 607-608, 609-610, 611-612, 613-614; Spanish 413-414, 607-608, 609-610, 611-612, 613-614, 615-616.

II. Linguistic—French 410, 413-414, 623-624, 625-626, 627-628; Spanish 413-414, 605-606. Students may emphasize one or both of these lines of study.

For students who enter with two years of high-school French the following outline course is recommended:

FIRST YEAR: French 403-404.

SECOND YEAR: (1) French 413-414.

(2) French 410.

THIRD AND FOURTH YEARS: (1) French 601-602, 605, 607-608, 609-610, 611-612, 613-614.

(2) French 623-624, 625-626, 627, 628, and Principles of Education 740 (Teaching of French).

For students who enter with two years of high-school Spanish the following outline course is recommended:

FIRST YEAR: Spanish 403-404.

SECOND YEAR: Spanish 413-414.

THIRD AND FOURTH YEARS: Spanish 605-606, 607-608, 609-610, 611-612, 613-614, 615-616, 617, 619, 620, and Principles of Education 745 (Teaching of Spanish).

NOTE: To receive a departmental recommendation as a teacher of French, the student must have taken French 401-402, 403-404, 413-414, 601-602, 627, 628, and Principles of Education 740 (Teaching of French) or their equivalent.

To receive a departmental recommendation as a teacher of Spanish, the student must have taken Spanish 401-402, 403-404, 413-414 or their equivalent; and, in addition to one advanced course, 620 and Principles of Education 745 (Teaching of Spanish).

MINORS IN COMMERCIAL SUBJECTS**MINOR IN ACCOUNTING**

Accounting	(401) 5	Accounting	(601) 5
Accounting	(402) 5	*Elective	10

* Must be advanced courses in Accounting, Business Organization, Economics, or Geography.

MINOR IN COMMERCIAL GEOGRAPHY

Geography	(401) 5	Geography	(631) 3
Geography	(403) 5	*Elective	9
Geography	(422) 3		

* Must be advanced courses in Geography from the "600" group.

MINOR IN OFFICE PRACTICE

Business Organization	(621) 3	Business Organization	(691) 3
Business Organization	(604) 3	Business Organization	(640) 3
Business Organization	(605) 3	*Elective	10

* Must be in Accounting or in Business Organization, or in both, and in the "600" group.

MINOR IN RETAIL SELLING

Business Organization	(700) 5	Accounting	(623) 3
Business Organization	(712) 3	*Elective	10
Business Organization	(705) 4		

* Must be in courses in Accounting, Geography, or Business Organization, and in the "600" group.

MINOR IN JOURNALISM

Journalism	(401) 5	Journalism	(502) 3
Journalism	(402) 5	*Elective	9
Journalism	(501) 3		

*Must be advanced courses in Journalism from the "600" group.

COMBINATION CURRICULUM

ARTS-EDUCATION

A candidate who has received credit for 220 Quarter-hours, including military science, physical education, and hygiene, and who has met all of the requirements of the College of Liberal Arts for the degree of Bachelor of Arts, as well as all of the requirements of the College of Education for the degree of Bachelor of Science in Education, will be recommended for both degrees. It is possible to meet these double requirements within a period of four and one-quarter years, or thirteen Quarters.

Residence in the Colleges. The student should register in both the College of Liberal Arts and the College of Education as soon as he decides to become a candidate for both degrees, and in any case not later than the beginning of his third year. A later decision may occasion loss of time. It is possible to apply (to the University Examiner) for double registration as late as the beginning of the last year in residence. The candidate must comply with the requirements of both Colleges and have his course of study approved by the Secretaries of both of these Colleges.

A student entering with advanced credit from other colleges must be in residence in the College of Liberal Arts and in the College of Education for at least one year. To be eligible for the degree of Bachelor of Arts, he must obtain credit, during the time registered in the College of Liberal Arts, for at least 45 hours and 90 points in courses listed in the Bulletin of the College of Liberal Arts; and to be eligible for the degree of Bachelor of Science in Education, he must obtain credit for 45 hours and 90 points in courses listed in this *Bulletin*.

Requirements in Points and Hours. To be eligible for both degrees, Bachelor of Arts and Bachelor of Science in Education, the candidate must have secured credit for 220 hours, including the requirements in military science, physical education, and hygiene, at the rate of not less than 1.8 points per credit hour undertaken. Of these, 160 hours must be gained by taking courses elective in the College of Liberal Arts. Of the remaining 60 hours, not less than 50 hours must be taken in professional courses of the College of Education, as outlined on page 36 of

this *Bulletin*, and points secured for work in professional courses must be at the 1.8 points per hour ratio.

Degrees. In general the candidate will find it necessary to carry on courses in both Colleges throughout at least the last three years of the combination curriculum, completing the work of both Colleges simultaneously. The two degrees will therefore be conferred at the same time. There is no objection, however, to conferring the degrees at different times, if the candidate should order his work in such a way as to make this desirable.

A student who has completed the course in supervised teaching will not be recommended for the degree of Bachelor of Arts until he has met all the requirements for the degree of Bachelor of Science in Education.

DEPARTMENTS OF INSTRUCTION

ACCOUNTING

Office, 309 Commerce Building

PROFESSOR GREER, ASSOCIATE PROFESSOR TAYLOR, ASSISTANT PROFESSORS
MILLER AND WILLCOX, MR. BOLON, MR. SHONTING, AND
DEPARTMENT ASSISTANTS

401-402. Elements of Accounting. Five credit hours. Two Quarters. Both 401 and 402 are given Autumn, Winter, Spring. Three recitations and two two-hour laboratory periods each week. Prerequisite or concurrent, Economics 401-402 or 403-404. Mr. Shonting and assistants.

The work of the first Quarter consists of the theory of account construction together with the development of books of original entry.

The second Quarter is devoted to the application of accounting principles to the different forms of business organization and the preparation and interpretation of financial statements.

FOR ADVANCED UNDERGRADUATES AND GRADUATES

According to the University regulations, courses in this group are not open to Freshmen and Sophomores.

601. Advanced Principles of Accounting. Five credit hours. One Quarter. Autumn, Winter, Spring. Five lectures and recitations each week. Prerequisite, Accounting 401-402. Mr. Taylor, Mr. Miller, Mr. Bolon.

The principles of modern accounting, especially those connected with the corporate balance sheet and income statement. Accounting problems arising in the organization of a corporation. Treatment of capital stock and bond issues, depreciation. Various forms of income statements in typical manufacturing enterprises. Principles of valuation of assets.

602. Advanced Principles of Accounting. Five credit hours. One Quarter. Autumn, Winter, Spring. Five lectures and recitations each week. Prerequisite, Accounting 601. Mr. Miller, Mr. Bolon.

The accounting procedure in connection with corporate reorganizations and dissolutions. Consolidated balance sheets and income statements, branch house accounting, foreign exchange accounting.

603-604. Cost Accounting. Four credit hours. Two Quarters. 603, Autumn and Winter; 604, Winter and Spring. Three lectures and recitations and one two-hour laboratory period each week. Prerequisite or concurrent, Accounting 601. Not open to students who are taking Accounting 624. Mr. Willcox.

Accounting 603: General methods of collecting costs of material, labor, and burden and incorporating them in the books of account. Cost control including the use of the perpetual inventory and various subsidiary ledgers.

Accounting 604: Various methods of distributing burden costs. Presentation of cost data. Problems of cost accounting in multiple process industries.

616. Business Statements. Three credit hours. One Quarter. Autumn and Spring. Three hours of lectures and problems each week. Prerequisite, Accounting 601. Mr. Bolon.

A study of the different kinds of statements prepared by corporations for the guidance of executives, directors, stockholders, and creditors. The methods used in

preparing the necessary statements together with the principles of statement interpretation. Use is made of current statements of well-known corporations. Lectures and problems.

623. Retail Accounting. Three credit hours. Autumn Quarter. Three lectures and recitations each week. Prerequisite, Accounting 401-402. Not open to students taking Accounting 612 or doing major work in the accounting group. Mr. Miller.

The principles of accounting as applied to the operations of retail merchandising enterprises. A study of the forms and procedure used in retail stores, with particular reference to the systems of department stores, chain stores, and other establishments prominent in the field. This course is intended primarily for students whose major interest is in fields other than accounting.

AGRICULTURAL CHEMISTRY

Office, 211 Townshend Hall

PROFESSOR LYMAN, ASSISTANT PROFESSORS ALMY AND
BURRELL

402. Household Chemistry. Five credit hours. One Quarter. Autumn, Winter, Spring. Three recitations and two three-hour laboratory periods each week. Home Economics, second year. Prerequisite, Chemistry 402 or 412. Mr. Almy, Mr. Burrell.

An introductory course in organic chemistry and its applications to household affairs. Laboratory work consists of a brief introduction to quantitative analysis, followed by the quantitative examination of carbohydrates, fats, and proteins, and other substances of interest in the household.

403. Household Chemistry. Five credit hours. One Quarter. Autumn, Winter, Spring. Three lectures and two three-hour laboratory periods each week. Home Economics, second year. Prerequisite, Agricultural Chemistry 402. Mr. Lyman.

Lectures on the chemistry of human nutrition. Laboratory work on the chemistry of digestion, utilization of food by animals, growth, storage of food reserves, oxidation, and the products of oxidation in the animals.

AGRICULTURAL ENGINEERING

Office, 105 Ives Hall

PROFESSOR McCUEN, ASSISTANT PROFESSOR POTTER

406. Household Mechanics. Five credit hours. One Quarter. Autumn, Winter, Spring. Two lectures, one recitation, and two two-hour laboratory periods each week. Home Economics, second year. Mr. Potter.

A study of the construction, care, and operation of the mechanical equipment of the household and the application of the physical principles involved.

AMERICAN HISTORY

(See History)

ANATOMY

Office, Hamilton Hall

PROFESSOR LANDACRE, ASSISTANT PROFESSOR KNOUFF, MR. SETTERFIELD,
AND DEPARTMENT ASSISTANTS

401. Comparative Anatomy of the Vertebrates. Five credit hours. Autumn Quarter. Two lectures or recitations and three two-hour laboratory periods each week. Not open to Freshmen. Prerequisite, Zoology 401 or equivalent. Mr. Knouff, Mr. Setterfield.

The anatomy of the vertebrates.

402. Comparative Anatomy of the Vertebrates. Five credit hours. Winter Quarter. Two lectures or recitations and three two-hour laboratory periods each week. Not open to Freshmen. Prerequisite, Zoology 401 or equivalent. Mr. Knouff, Mr. Setterfield.

The anatomy of the vertebrates.

408. Elementary Neurology. Five credit hours. Autumn Quarter. Two lectures and six laboratory hours each week. Not open to Freshmen. Mr. Landacre.

The gross structures of the brain and sense organs with special reference to their functional significance.

409. Elementary Neurology. Five credit hours. Winter Quarter. Two lectures and six laboratory hours each week. Not open to Freshmen. Mr. Landacre.

The study of the microscopic structures of the sense organs and of the spinal cord and brain with special reference to reaction systems.

410. Visceral Anatomy. Three credit hours. One Quarter. Autumn and Spring. One lecture and four laboratory hours each week. Education-Science Nursing, second year. Prerequisite, two Quarters of biology. Open to Nurses, Juniors, and Seniors. Mr. Setterfield.

A lecture and demonstration course on the viscera of mammals with special reference to visceral anatomy in man. This course is designed for women specializing in nursing and dietetics.

412. Elementary Human Anatomy. Five credit hours. Spring Quarter. Two lectures or recitations and six laboratory or demonstration hours each week. Physical Education, second year. Prerequisites, Zoology 401 and Anatomy 414. Mr. Knouff and assistant.

A brief study of visceral anatomy of the human body on the foundation laid in Anatomy 402, followed by a study of the skeleton, joints and muscles as a preliminary to kinesiology.

414. Comparative Anatomy of the Vertebrates. Five credit hours. Winter Quarter. Two lectures and six laboratory hours each week. Physical Education and Education-Science Nursing, first year. Prerequisite, Zoology 401. Mr. Setterfield.

The anatomy of one or more of the higher vertebrates.

This course is not open to students who have credit for Anatomy 402.

FOR ADVANCED UNDERGRADUATES AND GRADUATES

According to the University regulations, courses in this group are not open to Freshmen and Sophomores.

607. Comparative Neurology. Five credit hours. Autumn Quarter. One lecture or conference and eight laboratory hours each week. Prerequisite, Anatomy 401-402, or 403-404, or 626. Mr. Landacre.

The origin of the ganglia, central nervous system, and sense organs of the lower vertebrates.

608. Comparative Neurology. Five credit hours. Winter Quarter. One lecture and eight laboratory hours each week. Prerequisite, Anatomy 401-402, or 403-404, or 626. Mr. Landacre.

The reaction systems of the lower vertebrates with special reference to the interpretation of these systems in mammals.

609. Comparative Neurology. Five credit hours. Spring Quarter. One lecture and eight laboratory hours each week. Prerequisite, Anatomy 401-402, or 403-404, or 626. Mr. Landacre.

A study of the reaction systems in mammals with special emphasis on their phylogenetic origin.

ANCIENT ART

(See Greek Language and Literature)

ARCHITECTURE

Office, 106 Brown Hall

PROFESSORS CHUBB, BRADFORD, BAUMER AND RONAN, MR. OMAN, MR. BUCK, MR. WOOD

402. Perspective. Three credit hours. Winter Quarter. One recitation, six laboratory hours, and two hours of preparation each week. Landscape Architecture, second year. Prerequisite, Architecture 420. Mr. Oman.

Lectures on theory of perspective drawing and practice in perspective drawing in various mediums.

403. Composition. Three credit hours. Spring Quarter. Three lectures and six hours of preparation each week. Landscape Architecture, second year. Prerequisite, Architecture 420. Mr. Chubb.

Lectures on architectural composition in plan and elevation. Theory of design, scale, proportion, massing, etc.

420. Elements of Architecture. Eight credit hours. One Quarter Autumn and Spring. Three lectures, fifteen laboratory hours, and six hours of preparation each week. Landscape Architecture, second year. Prerequisite, Engineering Drawing 429. Mr. Ronan, Mr. Oman.

Lectures and drawing exercises on the classic orders, mouldings, walls, roofs, doors, windows, arches, vaults, domes, floors, ceilings, etc., together with lectures and exercises in casting and rendering in wash the shades and shadows of these elements.

422. Order Problems. Five credit hours. One Quarter. Autumn, Winter, Spring. Twelve laboratory hours and three hours of preparation each week. Landscape Architecture, second year. Prerequisite, Architecture 420. All instructors.

Original problems in elevation involving the use of the classic orders. Individual criticism and library research.

423. Order Problems. Five credit hours. One Quarter. Autumn, Winter, Spring. Twelve laboratory hours and three hours of preparation each week. Landscape Architecture, second year. Prerequisite, Architecture 422. All instructors.

Original problems in elevation involving the use of the classic orders. Individual criticism and library research.

ART

(See Fine Arts)

ASTRONOMY

Office, Emerson McMillin Observatory

PROFESSOR MANSON, MR. WILLIAMS

401. General Astronomy. Five credit hours. One Quarter. Autumn, Winter, Spring. Four lecture or quiz periods and one two-hour laboratory period each week. Each student will be assigned to a regular daytime laboratory period and there will be occasions during the Quarter when for this daytime period there will be substituted an evening period of equal length. Prerequisite, elementary algebra and plane geometry. Mr. Manson, Mr. Williams.

An elementary course dealing with fundamental facts, principles and methods of astronomy.

402. General Astronomy. Five credit hours. One Quarter. Autumn, Winter, Spring. Four lecture or quiz periods and one two-hour laboratory period each week. Each student will be assigned to a regular daytime laboratory period and there will be occasions during the Quarter when for this daytime laboratory period there will be substituted an evening period of equal length. Prerequisite, Astronomy 401 or its equivalent. Mr. Manson, Mr. Williams.

A continuation of Astronomy 401.

405. Practical Astronomy. Three or five credit hours. Autumn Quarter. The time is divided among lecture, quiz and laboratory periods as seems convenient. Prerequisite, Astronomy 401 and trigonometry. (For students in Civil Engineering the requirement of Astronomy 401 will be omitted.) Mr. Manson, Mr. Williams.

This course consists of the consideration of problems of practical astronomy, such as the determination of time, latitude and azimuth from astronomical observation.

Not open to students who have credit for Astronomy 601.

FOR ADVANCED UNDERGRADUATES AND GRADUATES

According to the University regulations, courses in this group are not open to Freshmen and Sophomores.

605. Introduction to Celestial Mechanics. Five credit hours. Winter Quarter. Prerequisite, calculus. Students electing Astronomy 605 are advised to take either before this course or concurrently with it a course in differential equations. Mr. Manson.

A discussion of rectilinear motion under the law of inverse squares and under the law of direct distance; central forces, including the character of the orbit under different laws of attraction; the potential and attraction of bodies; the problem of two bodies, including the computation of positions of planets and comets.

606. Introduction to Celestial Mechanics. Five credit hours. Spring Quarter. Prerequisite, Astronomy 605 or equivalent. Mr. Manson.

A discussion of the determination of the orbits of planets and comets; the general integrals of the problems of "n" bodies and an introductory discussion of the problems of three bodies, lunar theory and perturbations.

607. Advanced Astronomy. Three or five credit hours. Winter Quarter. The time is divided among lecture, quiz, and laboratory periods as seems convenient. Students electing this course should consult the instructor regarding prerequisites. Mr. Manson, Mr. Williams.

This course together with 608, which is a continuation of it, is designed for students who wish to take advanced work in astronomy other than that given in Astronomy 609-610 or in 605-606. The course will be adapted to the desires and capabilities of the students electing it.

608. Advanced Astronomy. Three or five credit hours. Spring Quarter. Mr. Manson, Mr. Williams.

A continuation of Astronomy 607, or by special permission may be taken by students who have not taken Astronomy 607.

609. Stellar Astronomy. Five credit hours. Spring Quarter. The time is divided between lecture and laboratory periods as seems convenient. The instructor should be consulted regarding prerequisites. Ordinarily the prerequisites will consist of Astronomy 402, and either high school or college physics. Mr. Williams.

This course deals with that part of stellar astronomy which treats principally of the application of spectroscopy and atomic theory to astronomical problems. Such problems as classification of stellar spectra, giant and dwarf stars, spectroscopic parallaxes, solar and stellar temperatures, stellar evolution and nebulae will be discussed.

610. Stellar Astronomy. Five credit hours. Autumn Quarter. The time is divided between lecture and laboratory periods as seems convenient. In Astronomy 610 the laboratory work will consist principally of computations. Prerequisite, Astronomy 402 and trigonometry. A knowledge of calculus is desirable but not essential. Students electing this course should have a liking for work that is mathematical in its nature. Astronomy 609 is not a prerequisite for 610. If so desired, 610 may be followed by 609. Mr. Manson.

This course deals with that part of stellar astronomy which treats principally of stellar motions and distances. Such problems as determination of stellar distances, double stars, the solar motion, and star streaming will be discussed.

BACTERIOLOGY

Office, 202 Veterinary Laboratory Building

PROFESSORS MORREY AND STARIN, ASSISTANT PROFESSOR SPEER,
MR. MCCRIMMON, MR. HELZ, MISS TRACY

These courses in bacteriology are open to advanced undergraduate and graduate students only. The instructor in charge must be consulted before electing. Prerequisites, one year of chemistry and two Quarters of a biological science.

FOR ADVANCED UNDERGRADUATES AND GRADUATES

According to the University regulations, courses in this group are not open to Freshmen and Sophomores.

607. General Bacteriology. Five credit hours. One Quarter. Autumn and Spring. Two class periods and three three-hour laboratory periods each week. Home Economics, third year. Mr. Morrey, Mr. McCrimmon, Mr. Helz, Miss Tracy.

This course is a prerequisite to all elective courses in the department and is designed to prepare for special work. The lectures consider the botanical relationships of bacteria, their morphology, classification, effect of physical and chemical environment, action on food material, etc. The laboratory work includes preparation of the ordinary culture media and making of cultures on these media, staining methods, and some typical biochemical actions.

608. Pathogenic Bacteria. Three credit hours. Winter Quarter. Three class periods each week. Prerequisite, Bacteriology 607. Mr. Morrey.

A study of the more important bacteria producing disease in man; ways of transmission and methods of protection against infectious diseases; sanitation and the theories of immunity.

609. Pathogenic Bacteria. Three credit hours. Winter Quarter. Three three-hour laboratory periods each week. Prerequisite, Bacteriology 607. Mr. Morrey, Mr. McCrimmon, Mr. Helz, Miss Tracy.

Laboratory work on the more important bacteria producing disease in man, including cultural and staining properties, methods of diagnosis, animal inoculation.

614. Water Examination, Sewage Disposal, Water Filtration. Three credit hours. Winter Quarter. Three class periods each week. Prerequisite, Bacteriology 607. Mr. Morrey.

A study of the organisms concerned in these processes. The modern water filtration and sewage disposal plants of the city of Columbus afford most excellent opportunities for practical demonstration and also for study of special problems.

615. Water Examination, Sewage Disposal, Water Filtration. Three credit hours. Winter Quarter. Three three-hour laboratory periods each week. Prerequisite, Bacteriology 607. Mr. Morrey.

Laboratory work on the organisms discussed in Bacteriology 614.

* **616. Bacteriological Chemistry.** Three credit hours. Spring Quarter. Three class periods each week. Prerequisite, Bacteriology 607. Mr. Morrey.

Enzymes and the theory of their action. Technical uses of bacteria and fungi in the fermentation and allied industries.

* **620. Bacteriological Chemistry.** Three credit hours. Spring Quarter. Three three-hour laboratory periods each week. Prerequisite, Bacteriology 607. Mr. Morrey.

Laboratory work in connection with Bacteriology 616.

617. Immunity and Serum Therapy. Three credit hours. One Quarter. Autumn and Spring. Three class periods each week. Prerequisites, Bacteriology 607, 608, and 609, or equivalent. Mr. Starin.

A discussion of the general principles of immunity, including toxins and anti-toxins, bactericidal substances, agglutinins, precipitins, opsonins, etc.

618. Immunity and Serum Therapy. Three credit hours. Spring

* Not given in 1928-1929.

Quarter. Three three-hour laboratory periods each week. Prerequisites, Bacteriology 607, 608, and 609, or equivalent. Mr. Starin.

Laboratory work in the preparation of toxins, antitoxins, antibacterial substances, bacterial vaccines, and in the serological methods of diagnosis.

619. Pathogenic Protozoa. Three credit hours. Spring Quarter. Three class periods each week. Prerequisites, Bacteriology 607, 608, and 609, or equivalent. Mr. Starin.

The various protozoal diseases are considered, with special attention to trypanosomiasis, piroplasmosis, and spirochaetosis.

625-626. Special Technique in Pathogenic Bacteriology. Five credit hours. Autumn and Winter Quarters. Conferences, library, and laboratory work. Prerequisites, Bacteriology 607, 608, and 609, or equivalents. Mr. Starin.

A course in technique in which the student is thoroughly trained in working with such material and methods as are encountered in board of health and hospital laboratories.

627. Special Problems in Pathogenic Bacteriology. Five credit hours. Spring Quarter. Conferences, library, and laboratory work. Prerequisites, Bacteriology 607, 608, 609, 625, and 626, or equivalents. Mr. Starin.

701. Minor Investigations. Three to five credit hours each Quarter. Autumn, Winter, Spring Quarters. A student may enter at the beginning of any Quarter. Prerequisites, Bacteriology 607, 608, 609 and either 617, 618, or 625, 626 or equivalents. Mr. Morrey, Mr. Starin, Mr. Speer.

These courses are designed for such students as have completed the equivalent of two years' work in bacteriology and are still undergraduates. The work will be outlined by the instructor in charge to meet the individual student's needs.

FOR GRADUATES

An undergraduate student shall not be permitted to take any course in the "800" group except by permission of the Graduate Council.

801-802-803. Research Work in Pathogenic Bacteriology.

804-805-*806. Research Work in Agricultural or in Technical Bacteriology.

For description of graduate courses in this department see the Bulletin of the Graduate School.

BIBLIOGRAPHY

Office, The Library

MISS JONES AND MEMBERS OF THE LIBRARY STAFF

501-502-503. The Library and the School. Two credit hours. Autumn, Winter, Spring Quarters. Two lectures each week.

A course for teacher-librarians, dealing with the methods of teaching secondary school students how to make use of a library. Practice work is given in such technical library methods as will enable a teacher to take charge of a collection of books in a school building.

505-506-507. The Use of Books and of Libraries. Two credit hours. Autumn, Winter, Spring Quarters. Two class periods each week.

A course for students in all colleges. It is desirable that the course be taken in the Sophomore or Junior year. The course covers a study of book evaluation, both

* Not given in 1928-1929.

physical make-up and content, and a study of the general use of the Library. There is a detailed study of government documents and their indexes.

FOR ADVANCED UNDERGRADUATES AND GRADUATES

According to the University regulations, courses in this group are not open to Freshmen and Sophomores.

601-602-603. History of Book-making. Two credit hours. Autumn, Winter, Spring Quarters. Two class periods each week.

Principal topics: Clay tablets, manuscripts, paper making, incunabula, book binding, copyright, book publishing, newspaper publishing, book selling, book illustration, and the history of printing.

BOTANY

Office, 102 Botany and Zoology Building

PROFESSORS TRANSEAU, SCHAFFNER, STOVER, AND SAMPSON, ASSISTANT PROFESSORS WALLER, TIFFANY, AND SAYRE, MR. HUMPHREY, MISS LAMPE, MISS WILLIAMS, MR. CAMP, AND DEPARTMENT ASSISTANTS

401. General Botany. Five credit hours. One Quarter. Autumn, Winter, Spring. Three recitations and two two-hour laboratory periods each week. Mr. Sampson, Mr. Waller, Mr. Tiffany, Mr. Sayre, Mr. Humphrey, Miss Lampe, Miss Williams, Mr. Camp, and assistants.

A study of the structure of leaves, stems and roots; growth and nutritive processes of plants, and the relation of plants to their environments. Demonstrations to explain plant processes and field trips dealing with the classification of trees and the effect of the factors of climate and soil on growth, reproduction, duration, and distribution of plants.

402. General Botany. Five credit hours. One Quarter. Autumn, Winter, Spring. Three recitations and two two-hour laboratory periods each week. Mr. Sampson, Mr. Waller, Mr. Tiffany, Mr. Sayre, Mr. Humphrey, Miss Lampe, Miss Williams, Mr. Camp, and assistants.

A study of reproduction, seeds, fruits, variations, heredity and evolution in plants, followed by a general survey of the great climatic formations of the natural vegetation of North America and their relations to the centers of crop distribution; the nutrition and reproduction of bacteria and fungi in relation to decay, nitrate formation, diseases, and sanitation; a survey of the great plant groups, and the classification of some of the common plants of Ohio.

405. Local Flora. Five credit hours. Spring Quarter. Two lectures and three two-hour laboratory periods each week. Prerequisite, Botany 401-402. Mr. Tiffany.

The aim of the course is to become familiar with the plants, other than ferns and seed plants, common in Ohio. Laboratory work devoted to identification, by keys and manuals, of common forms of algae, fungi, liverworts, and mosses. Lectures on methods of collection and preservation, chief characteristics, and economic importance of the groups.

406. Local Flora. Five credit hours. Spring Quarter. Two lectures and six hours laboratory and field work each week. Prerequisite, Botany 401-402. Mr. Tiffany.

A laboratory, field and lecture course devoted to classifying the ferns and seed plants common in Ohio. Field characteristics and identification in the field will be emphasized as well as use of manuals and keys.

409. General Morphology of Thallophytes and Bryophytes. Five credit hours. Autumn Quarter. Three lectures and two two-hour laboratory periods each week. Prerequisite, Botany 401-402.

A study of the classification and life histories of the algae, fungi, liverworts, and mosses. The laboratory work will consist of a study of the vegetative and reproductive structures of the several groups.

410. General Morphology of the Pteridophytes and Spermatophytes. Five credit hours. Winter Quarter. Three lectures and two two-hour laboratory periods each week. Prerequisite, Botany 401-402.

A study of the structure and life histories of the ferns, gymnosperms, and angiosperms, giving particular attention to the structure and development of seed plants.

415. Plant Physiology. Five credit hours. Autumn Quarter. Three lectures and two two-hour laboratory periods each week. Prerequisite, Botany 401-402. Mr. Transeau, Mr. Sayre.

The physiology of absorption and movement of water, salts, and gases in plants. The properties of water, solutions, and colloids; permeability, diffusion, absorption, transpiration, and the movement of water in plants.

416. Plant Physiology. Five credit hours. Winter Quarter. Three lectures and two two-hour laboratory periods each week. Prerequisite, Botany 415. Mr. Transeau, Mr. Sayre.

The physiology of nutrition, growth and movement; photosynthesis, other syntheses, enzymes, digestion, translocation, accumulation, assimilation, respiration, fermentation, growth and movement.

419. General Plant Pathology. Five credit hours. One Quarter. Autumn and Spring. Three lectures and two two-hour laboratory periods each week. Prerequisite, Botany 401-402. Mr. Stover.

An introduction to the study of the diseases of cultivated plants. The course includes such subjects as: the nature, importance, causes, symptoms, spread, classification, and control of plant diseases; the life history of pathogenic organisms; the course of a plant disease; and the effects of environmental conditions, cultural practices, and the history of the host species upon the occurrence and severity of diseases. A number of representative plant diseases of economic importance are studied in the field and in the laboratory.

421. Plant Microtechnic. Five credit hours. Spring Quarter. Two lectures and three two-hour laboratory periods each week. Prerequisite, Botany 401-402.

Principles and methods of killing, fixing, imbedding, sectioning, staining, and mounting plant materials for microscopic study.

***423. Economic Plant Geography.** Three credit hours. Spring Quarter. Three lectures each week. Not intended for major botany students. Such students should select Botany 619 and 620. Prerequisite, Botany 401. Mr. Waller.

The geographic distribution of economic plants and its effect on the business of the world and on the lives of people dependent upon the products of these plants.

FOR ADVANCED UNDERGRADUATES AND GRADUATES

According to the University regulations, courses in this group are not open to Freshmen and Sophomores.

601. Plant Ecology. Five credit hours. Autumn Quarter. Three lectures and one four-hour laboratory period each week. Prerequisites, Botany 401-402 and two Quarters of biological work. Mr. Transeau.

* Not given in 1928-1929.

Lectures on the vegetation of the Eastern United States with special reference to the plant associations and formations of Ohio. Field work on the associations of the vicinity of Columbus and their successions. Reading of important literature.

602. Plant Ecology. Five credit hours. Spring Quarter. Three lectures and one four-hour laboratory period each week. Prerequisite, Botany 601. Mr. Transeau.

General principles of ecological plant geography. A discussion of associations and successions of the major divisions of the vegetation of North America. Assigned readings of the more important literature. Several Saturday field trips.

607. Principles of Taxonomy: Pteridophytes and Gymnosperms. Five credit hours. Autumn Quarter. Two lectures and six laboratory hours each week. Prerequisite, Botany 401-402 and one additional year of some biological subject. Mr. Schaffner.

A detailed study of phylogeny and evolutionary series based on floral structure and organography.

608. Principles of Taxonomy: Monocotyls. Five credit hours. Winter Quarter. Two lectures and six laboratory hours each week. Prerequisite, Botany 607. Mr. Schaffner.

A study of the groups of monocotyls with special consideration of the taxonomy of the grasses and of the lack of correlation between taxonomic characters and environment.

609. Principles of Taxonomy: Dicotyls. Five credit hours. Spring Quarter. Two lectures and six laboratory hours each week. Prerequisite, Botany 608. Mr. Schaffner.

A general consideration of all the groups of dicotyls, of the origin of angiosperms, and of the progressive or serial development of characters.

611. Evolution of Plants. Five credit hours. Spring Quarter. Lectures and assigned readings. Prerequisites, Botany 401-402 and one additional year of botany. Mr. Schaffner.

The progress of evolution in the plant kingdom with a general discussion of the problems and factors involved, including both the scientific and philosophical aspects of the subject.

619. Economic Botany. Five credit hours. Autumn Quarter. Three lectures and two two-hour laboratory periods each week. Prerequisites, Botany 401-402 and one additional year of biological work. Desirable antecedents, commercial geography, and plant and animal ecology. Mr. Waller.

The world's food resources are examined in the light of botanical problems involving geographic distribution of economic plants. A summary is made of the centers of production of food-producing plants and the relation of these centers to natural plant formations is discussed. Trips to various industrial concerns utilizing plant materials are combined with laboratory examination of plant products.

620. Economic Botany. Five credit hours. Winter Quarter. Four lectures and one two-hour laboratory period each week. Prerequisites, Botany 401-402 and one additional year of biological work. Desirable antecedents, commercial geography and plant and animal ecology. Mr. Waller.

The fiber and oil producing plants and the forest products are discussed in this course. The same ecological and economic principles discussed in the previous course are applied, and an analysis is made of trade relations of the products to natural

environmental factors governing the distribution of the plants. Visits are made to the industrial establishments using the materials discussed.

633. Physiological Methods. Three credit hours. Winter Quarter. Three two-hour laboratory periods each week. Desirable antecedents, plant chemistry and plant microchemistry. Consult instructor before registering. Mr. Sayre.

A laboratory course of methods in plant physiology such as the determination of osmotic pressure; H-ion concentration and buffer action of plant juices; the swelling of plant colloids; permeability of plant membranes; carbon dioxide-oxygen ratios; and the measurement of transpiration, growth and environmental factors.

634. Plant Growth. Three credit hours. Spring Quarter. Three lectures each week. Consult instructor before registering. Mr. Sampson.

A study of the physiology of growth. Special attention is given to the inter-related effects of internal and external factors upon growth, movement and reproduction in plants. Bibliographies and reviews of literature.

* **635. Experimental Plant Genetics.** Five credit hours. Spring Quarter. Two lectures and three two-hour laboratory periods each week. Spring Quarter in alternate years. Prerequisites, Botany 401-402 and two additional Quarters of biology including Zoology 403 (General Principles of Heredity). Mr. Schaffner.

Special emphasis will be placed on fluctuation and the varying expression of hereditary factors in respect to vegetative maturity, size, form, structure, and sexual states, through the influence of environment. Also problems of self and cross pollination and their practical application to selected types of economic plants.

* **640. Plant Anatomy.** Five credit hours. Spring Quarter. Two lectures and three two-hour laboratory periods each week. Prerequisites, Botany 401-402 and two additional Quarters of biology.

The origin and development of the organs and tissue systems of vascular plants, and comparative study of the structures of roots, stems, leaves, flowers, and fruits. This course is a desirable antecedent to advanced work in physiology and pathology.

701. Special Problems: Taxonomy. Two to five credit hours. Prerequisites, Botany 401-402 and two additional Quarters of some biological subject. Mr. Schaffner, Mr. Transeau, Mr. Stover, Mr. Tiffany.

702. Special Problems: Morphology. Two to five credit hours. Prerequisites, Botany 401-402 and two additional Quarters of some biological subject. Mr. Schaffner.

703. Special Problems: Physiology and Ecology. Two to five credit hours. Prerequisites, Botany 401-402 and two additional Quarters of some biological subject. Mr. Transeau, Mr. Sampson, Mr. Waller, Mr. Sayre, Mr. Tiffany.

704. Special Problems: Pathology and Mycology. Two to five credit hours. Prerequisites, Botany 401-402 and two additional Quarters of some biological subject. Mr. Stover, Mr. Humphrey.

705. Special Problems: Economic Botany. Two to five credit hours. Prerequisites, Botany 401-402 and two additional Quarters of some biological subject. Mr. Waller.

NOTE: TEACHING COURSES. For the Teaching Course in this department see the Department of Principles of Education, Course 705.

* Not given in 1928-1929.

FOR GRADUATES

An undergraduate student shall not be permitted to take any course in the "800" group except by permission of the Graduate Council.

- 801. Research in Systematic Botany.
- 802. Research in Morphology and Cytology.
- 803. Research in Physiology and Ecology.
- 804. Research in Mycology and Plant Pathology.
- 805. Research in Genetics.
- 806. Research in Economic Botany.
- 810. Botanical Seminary.

For description of graduate courses in this department see the Bulletin of the Graduate School.

BUREAU OF EDUCATIONAL RESEARCH

Office, 201 Education Building

PROFESSORS BUCKINGHAM, ASHBAUGH AND *CLIFTON, ASSOCIATE PROFESSORS HOLY AND ANDERSON, AND DEPARTMENT ASSISTANTS

The purpose of the Bureau of Educational Research is to promote the scientific investigation of educational problems both at the University and in the public schools of the State. It constitutes an agency for cooperative effort among all the school people of Ohio. The facilities of the Bureau are available to all students, faculty members, and school people of Ohio.

Library. The research library contains large quantities of material in the form of manuscripts, pamphlets, bulletins, reports, modern textbooks for elementary and high-school grades, and educational periodicals. This library is in charge of a reference librarian, and her services, together with the library material, will be utilized in the preparation of bibliographies and reports on problems presented by those engaged in educational work. This applies to students and faculty members as well as those engaged in the work of the public schools. Unless the problem requires extensive investigation, this service will be rendered gratis.

Courses. In order to make the resources of the Bureau serve for research purposes, students desiring to work in the Bureau may register in certain courses listed in the Departments of School Administration, Psychology, and Principles and Practice of Education. Courses must be approved by the head of the particular department and by the Director of the Bureau. Such students will be under the direction and supervision of the Bureau staff.

Research Problems. Students taking such courses will be given a practical problem upon which to work. There will be no regular recitation periods, but the student will be in a position to confer with the Bureau staff whenever advisable. According to the nature and exacting

* Absent on leave.

character of the problem and of the scholastic status of the student, he may be registered in either of two groups of courses, as follows:

MINOR PROBLEMS. Two to four credit hours. Investigation of minor problems.

Psychology 650
Principles and Practice of Education 651
School Administration 618
Vocational Education 620

MAJOR PROBLEMS. Three or more credit hours. Investigation of problems, leading to preparation of theses for advanced degrees.

Psychology 801
Principles and Practice of Education 851.
School Administration 805, 806, and 807
Vocational Education 801

NOTE: Descriptions of these courses will be found under the department announcements.

BUSINESS ORGANIZATION

Office, 311 Commerce Building

PROFESSORS WEIDLER, RUGGLES, HOAGLAND, MAYNARD, DICE, HELD, WISSLER AND DUFFUS, ASSISTANT PROFESSORS PIKE, REEDER, DAVIS, BECKMAN, AND SHIVELY, MR. POWER, MR. FAIR, MR. KAUFMAN, MR. SMITH, AND DEPARTMENT ASSISTANTS

FOR ADVANCED UNDERGRADUATES AND GRADUATES

According to the University regulations, courses in this group are not open to Freshmen and Sophomores.

604-*605. Business Communications and Adjustment Practice. Three credit hours. Two Quarters. 604, Autumn, Winter, Spring; 605, Winter. Three recitations each week. Prerequisite, Economics 401-402. Mr. Held.

The principles of effective writing; the requirements of a satisfactory business letter, applications for positions; credit, collection, sales, and promotion correspondence; form letters and form paragraphs. An historical treatment of claims and complaints. Analysis of the present problem of adjustments in such fields as wholesaling, retailing, mail order business, etc. Current method of handling adjustments, by personal conference and correspondence. Administration of adjustments through a separate department; and association with collections or other departments.

620. Public Aspects of Industry. One credit hour. Winter Quarter. Mr. Ruggles.

621. Business Law: Contracts. Three credit hours. One Quarter. Autumn, Winter, Spring. Prerequisite, Economics 401-402. Mr. Power.

A course in the law of contracts for the student of business. A study of the fundamentals of legally binding agreements between persons, and their enforcement; including a study of the making of the contract, consideration, the effect of fraud, duress, undue influence, mistake, illegality, and the statute of frauds, interpretation, discharge and remedies.

623. Business Law: Agency and Sales. Three credit hours. One Quarter. Autumn, Winter, Spring. Prerequisite, Business Organization 621. Mr. Pike.

A course in the law of agency and sales for the student of business. The fundamentals of the law governing business transactions of persons through agents and the sale of personal property. A continuation of Business Organization 621.

* Not given in 1928-1929.

625. Business Law: Negotiable Instruments. Three credit hours. One Quarter. Autumn, Winter, Spring. Prerequisite, Business Organization 621. Mr. Bowers.

A course in the laws governing bills of exchange, promissory notes and checks designed to guide the business man in his daily transactions with such instruments.

627. Business Law: Partnerships and Corporations. Three credit hours. Autumn Quarter. Prerequisites, Business Organization 621 and 623. Mr. Pike.

A course designed to give the student of business a practical working knowledge of important laws governing the formation and operation of partnerships and corporations.

640. Corporate Organization and Control. Three credit hours. One Quarter. Autumn, Winter, Spring. Three recitations each week. Prerequisite, Economics 402. Mr. Donaldson.

Business enterprise; types; structure; incorporation; charter; by-laws; security certificates; indentures; organization meetings; directors and officers; duties; obligations; committees; control by stockholders and bondholders; proxies; voting trusts; minority stockholders' rights; expansion; incorporate relations; consolidations; methods; advantages and disadvantages; community of interest; contractual relationships; reorganization; liquidation; legislation and court decisions affecting organization and management of business; Federal Trade Commission.

650. Corporation Finance. Five credit hours. One Quarter. Autumn, Winter, Spring. Two lectures and three quiz periods each week. Prerequisite, Economics 402 or Business Organization 640. Mr. Hoagland, Mr. Duffus, Mr. Smith, Mr. Donaldson.

Financial structure and problems of modern business corporations; common types of securities; promotion, including parts played by promoter, investment banker and his organization, syndicate, security dealer; determination, management, and distribution of surplus financial problems of expansion, including changes in financial plans; securing funds for expansion; failure of corporations and resulting reorganization or liquidation; financial results of reorganization.

This course is not open to students who are taking Economics 616.

680. Industrial Organization and Management. Five credit hours. One Quarter. Autumn and Winter. Three lectures and two conferences each week. Prerequisite, Economics 402 or 404. Mr. Wissler, and assistants.

The organization and management of industries, history, literature, and theory of industrial management. Kind and internal development of organization, dealing particularly with problems or interrelation of functions and the general duties of various functions. A general survey of the problems of the manufacturing or industrial executive within an organization without entering into detailed studies of specific problems of manufacturing.

684. Industrial Management Field Work. Three to six credit hours. One Quarter. Summer, Autumn, Winter, Spring. To be completed before taking advanced courses. Prerequisite, Business Organization 680. Mr. Kaufman.

This work will probably carry pay and should be a regular, productive job in an industry. The job must carry the approval of the instructor and be followed by a report both from the employer and the student.

685. Material Organization and Management. Three credit hours. One Quarter. Autumn and Winter. Two lectures and one conference

each week. Prerequisite, Business Organization 680 or 681. Mr. Wissler, Mr. Davis, and assistant.

The organization and management of the problem of materials in industries. A study of the organization and functions of the purchasing, stores, stores controlling departments and that part of the planning, accounting, production, and other departments which directly affect the control of materials. The problems involved and accepted methods of handling and moving materials.

Students will be required to do field work involving visits and inspection of industries and to write constructive reports and a term thesis.

686. Personnel Organization and Management. Three credit hours. One Quarter. Autumn and Spring. Two lectures and one conference each week. Prerequisite, Business Organization 680 or 681. Mr. Wissler and assistant.

The organization and management of the employment department and the personnel problems within an industry. Deals particularly with the functions and problems which come within the scope of employment manager; such as, hiring, force maintenance, industrial education and welfare. Does not deal with questions of labor organization except in so far as is necessary for proper conception of these problems within an industry.

Students will be required to do field work involving visits and inspection of industries and to write constructive reports and a term thesis.

NOTE: Students taking Business Organization 686 as an elective must have Business Organization 680 as a prerequisite.

687. Production Organization and Management. Four credit hours. One Quarter. Winter and Spring. Two lectures, one conference, and two laboratory hours each week. Prerequisite, Business Organization 680 or 681. Mr. Davis, and assistant.

The problems of organization and management incident to the successful control of production in industry. Treats these problems largely from the point of view of a production manager. Coordinates personnel, equipment, and material to produce the necessary justification of organization in maximum production at least cost.

Students will be required to do field work involving visits and inspection of industries and to write constructive reports and a term thesis.

691. Office Organization and Management. Four credit hours. One Quarter. Autumn and Winter. Two lectures and one conference each week. Prerequisite, Senior standing. Mr. Davis, Mr. Kaufman.

Administration of offices. Methods of pay. Office manager. Standards, tools, forms, equipment, office machinery. Standard methods. Files, ticklers, mail handling, dictation, messengers. Engineering features. Special office problems of different departments.

700. Marketing. Five credit hours. One Quarter. Autumn, Winter, Spring. Five hours lecture and quiz each week. Prerequisite, Economics 401-402. Mr. Beckman, Mr. Reeder, Mr. Smith, Mr. McGinnis.

A general survey of the field of marketing. Critical consideration of functions, policies and institutions in the marketing of agricultural products, raw materials and manufactured goods.

A study of consumers' buying motives and demand and the marketing machinery which serves them. Functions, methods, costs of marketing and marketing problems of the farmer and manufacturer, wholesaler, jobber, commission merchant, selling agent, broker, factor, retailers of various types and other middlemen. Special attention given to principles, trends and policies in their relation to marketing efficiency.

702. Marketing Problems and Market Analysis. Four credit hours. One Quarter. Autumn, Winter, Spring. Four hours lecture and quiz

each week. Prerequisite, Business Organization 700. Mr. Weidler, Mr. Maynard, Mr. Beckman.

A consideration of the marketing problems of manufacturers, jobbers, selling agents, commission merchants, factors, brokers, agents, and retailers. Market analysis will be considered with reference to sources of information, procedure, and the use of results of such analyses in determining distribution policies and methods.

705-706. Retailing and Wholesaling. Four credit hours. Two Quarters. 705, Autumn, Winter, Spring; 706, Spring. Four lectures and discussion periods each week. Business Organization 705 or 706 may be taken separately. Prerequisite to either 705 or 706, Business Organization 700. Mr. Weidler, Mr. Beckman.

The first Quarter's work will be devoted to a consideration of the organization and management of retail establishments. Store location; store organization; buying; receiving; stockkeeping; inventories; sales systems; store policies; services; expenses and profits; deliveries; personnel problems, etc.

The second Quarter deals with the wholesaler as a link in the chain of distribution; classes of wholesalers; tendencies in wholesaling; wholesale centers; radii of operation; the organization and management of wholesale establishments. Location; organization; stock control; purchasing; receiving; pricing; inventories and stock records; sales systems and organizations; handling orders; shipping; credits and collections; house policies; dealer helps and other services; expenses; profits, etc.

712. Salesmanship and Sales Management. Four credit hours. One Quarter. Autumn, Winter, Spring. Four lecture and discussion periods each week. Prerequisite, Business Organization 700. Mr. Maynard, Mr. Shively, Mr. Beckman, Mr. Reeder.

Knowledge of goods; prospecting; study of customers and their wants; buying motives; planning a sale; attitudes of buyers; conducting a sales talk; meeting objections; closing the sale; cultivation of personality.

The second part of the course is devoted to a consideration of problems in sales management; sales organization; sales planning and research; sales policies; sales methods; selecting and training salesmen; territories and quotas; compensation of salesmen; stimulation of salesmen; supervision of salesmen.

716. Principles of Advertising. Three credit hours. One Quarter. Autumn, Winter, Spring. Three lecture and discussion periods each week. Prerequisite, Business Organization 700 or Senior standing in Journalism; preferably preceded by Business Organization 712. Mr. Maynard, Mr. Shively.

A survey study of advertising as an instrument of modern business. The place of advertising in business; economics of advertising; advertising research; advertising appropriations; advertising agencies and departments; media; trade-marks; and campaigns. A brief discussion of copy writing; type principles, layout, visualization, methods of advertising reproduction and psychological factors involved in selling.

725. Field Work in Marketing. Three to six credit hours. One Quarter. Autumn, Winter, Spring. Prerequisite, Business Organization 700. Mr. Weidler.

Before entering upon the fourth year of residence, an opportunity will be given to a limited number of students who have demonstrated their ability, to do one Quarter's work in business under the supervision of the instructional staff. The work will probably carry pay and must be a regular production position in the field of distribution. The position must have the approval of the instructor and a report will be made by both the student and the employer.

CERAMIC ENGINEERING

Office, 233 Lord Hall

PROFESSOR WATTS, ASSISTANT PROFESSOR CARRUTHERS

401. Occurrence and Properties of Clays. Four credit hours. Winter Quarter. Four lectures and eight hours of preparation each week. Ceramic Art, first year. Mr. Watts.

The origin, occurrence, and distribution of clays and other ceramic materials, their physical properties, and the systems of measuring same.

405. Winning, Preparation, and Forming. Four credit hours. Spring Quarter. Four lectures and eight hours of preparation each week. Ceramic Art, second year. Mr. Carruthers.

The winning and preparation of ceramic materials and the forming of ceramic wares.

605. Bodies, Glazes and Colors. Four credit hours. Spring Quarter. Four lectures and eight hours of preparation each week. Ceramic Art, second year. Prerequisites, Ceramic Engineering 401. Mr. Watts.

Ceramic bodies, glazes, and colors.

CHEMICAL ENGINEERING

Office 179, 180 New Chemistry Building

PROFESSOR WITHROW, MR. VILBRANDT, MR. BROWN, MR. DUNCOMBE, MR. GEORGE, AND DEPARTMENT ASSISTANTS

FOR ADVANCED UNDERGRADUATES AND GRADUATES

According to the University regulations, courses in this group are not open to Freshmen and Sophomores.

700. Elements of Chemical Engineering. Two credit hours. Winter Quarter. Prerequisite or concurrent, physical chemistry. Chemical Engineering, third year. Mr. Withrow.

A thorough discussion of the fundamental principles underlying the engineering operations which constitute the body of chemical engineering as a branch of engineering. An introduction is given to the mechanical equipment which is used to carry out these engineering operations in the chemical industries. The relationship between chemical processes and the selection of engineering equipment to carry out the engineering operations demanded by these chemical processes is emphasized. The market demand, economics and chemistry fundamental to or utilized by an industry is referred to as the basis which determines the engineering operations necessary in utilizing the chemistry for productive manufacture. The main detailed engineering operations taken up are: transportation; storage; crushing and grinding; calcination; solution; mixing and agitation; classifying; the separation of solids from liquids by sedimentation, filtration, crystallization, refrigeration, precipitation, evaporation, distillation, and electrolysis; the separation of liquids from liquids; drying; absorption; and the special engineering manipulation required in highly standardized or individualized chemical processes such as gasification, hydrogenation, sulphonation, nitration, chlorination, reduction, cracking, hydroxylation, autoclaving, and impregnation.

701-702. Industrial Chemistry. Three credit hours. Autumn and Winter Quarters. Three lectures each week. Prerequisite or concurrent, physical chemistry, except with special permission of the instructor. Mr. Withrow.

The fundamental lecture course in industrial chemistry, dealing with the problems of the chemical industries, and placing stress upon the economic questions involved in chemical manufacturing; materials of plant construction, as well as the engineering

operations involved in chemical engineering, and the principles underlying the applications of chemistry and engineering to a selected number of chemical industries. The work of the Autumn Quarter deals especially with the inorganic industries, while that of the Winter Quarter is related to the organic industries.

706. Chemical Engineering and Industrial Chemistry Laboratory. Five credit hours. Autumn Quarter. One conference and fourteen laboratory hours each week. Prerequisite or concurrent. Chemical Engineering 701, and an acceptable course in analytical chemistry. Mr. Withrow, Mr. Vilbrandt, Mr. Brown, Mr. Duncombe, Mr. George.

An introduction to industrial chemical research through assigned manufacturing problems, beginning with the general chemical industries. The specific problems are so chosen as to disclose the fundamental principles underlying the assigned industry, and practice is afforded in the preparation of written reports. Opportunity is given for study of operating efficiency of certain engineering equipment utilized in the fundamental engineering operations of chemical engineering. Weekly inspection trips are taken to plants in and around Columbus for study and report upon equipment and operation. Great emphasis is laid upon methods of attacking problems and upon organization of reports. Certain types of problems with engineering equipment, in factory research and in applied electrochemistry, are required of all students, after which opportunity is given the student to select special problems in various portions of the fields of industrial chemistry and chemical engineering such as absorption systems, filtration, petroleum and sugar technology, intermediates, wood distillation, insecticides, starch, lime, chlorine, and plant fume questions.

707. Engineering Chemistry and Chemical Engineering Laboratory. Three credit hours. Winter Quarter. One conference and eight laboratory hours each week. Prerequisite, Chemical Engineering 706; concurrent, Chemical Engineering 702. Mr. Withrow, Mr. Vilbrandt, Mr. Brown, Mr. Duncombe, Mr. George.

A continuation of Chemical Engineering 706, special emphasis laid upon technical methods of control as applied to industrial chemical processes.

710. Applied Electrochemistry. Three credit hours. Spring Quarter. Three lectures each week. Prerequisites, Chemistry 681-682-683 or special permission. Mr. Brown.

A survey of the electrochemical industries, and a discussion of the principles underlying the application of the electric current in chemical industries.

CHEMISTRY

Office, 100 Chemistry Building

General Chemistry Office, 193 New Chemistry Building

PROFESSORS McPHERSON, HENDERSON, FOULK, EVANS, BOORD, AND MACK,
ASSISTANT PROFESSORS HOLLINGSWORTH, FRANCE, DAY, AND
LOOKER, MR. O'DONNELL, MR. STEMEN, AND DEPARTMENT ASSISTANTS

401. Elementary Chemistry. Five credit hours. One Quarter. Autumn and Winter. One lecture, one recitation, and two three-hour laboratory periods each week. For students who do not present chemistry as an entrance credit. Mr. Evans, Mr. Looker, and assistants.

A general course in the chemistry of the non-metals. To be followed by Chemistry 402.

402. Elementary Chemistry. Five credit hours. One Quarter. Winter and Spring. One lecture, one recitation, and two three-hour

laboratory periods each week. For students who do not present chemistry as an entrance credit. Prerequisite, Chemistry 401. Mr. Evans, Mr. Looker, and assistants.

A continuation of the study of the non-metals and a survey of the chemistry of the metals. To be followed by Chemistry 403.

403. Qualitative Analysis. Five credit hours. Spring Quarter. One lecture, one recitation, and two three-hour laboratory periods each week. For students who do not present chemistry as an entrance credit. Prerequisite, Chemistry 402. Mr. Evans, Mr. Looker, and assistants.

A brief course in the systematic detection and separation of the metals and acids.

411. General Chemistry. Five credit hours. One Quarter. Autumn and Winter. One lecture, one recitation, and two three-hour laboratory periods each week. Prerequisite, an acceptable course in high-school chemistry. Mr. Evans, Mr. Day, and assistants.

A general course in the chemistry of the non-metals, more advanced than Chemistry 401. To be followed by Chemistry 412.

412. General Chemistry. Five credit hours. One Quarter. Winter and Spring. One lecture, one recitation, and two three-hour laboratory periods each week. Prerequisite, Chemistry 411. Mr. Evans, Mr. Day, and assistants.

A continuation of Chemistry 411, including the chemistry of the metals. To be followed by Chemistry 413.

413. Qualitative Analysis. Five credit hours. Spring Quarter. One lecture, one recitation, and two three-hour laboratory periods each week. Prerequisite, Chemistry 412. Mr. Evans, Mr. Day, and assistants.

A general course in qualitative analysis, dealing with the systematic separation and identification of the metals and acids. It also includes the application of the ionization theory, mass action law, and the principles of chemical equilibrium to qualitative analysis.

415. Laboratory Technique. Three credit hours. Winter Quarter. Laboratory work and general discussion. Prerequisite, one year of general chemistry. Mr. Hollingsworth.

This course deals with such subjects as glass blowing, soldering, and the construction of such apparatus as a teacher of chemistry should be able to make.

421-422-423. Quantitative Analysis. Four credit hours. Autumn, Winter, Spring Quarters. One recitation and nine laboratory hours each week. Prerequisite, acceptable courses in general chemistry, including qualitative analysis. Mr. Foulk, Mr. Hollingsworth, and assistants.

The fundamental course in quantitative analysis, including the principles of gravimetric and volumetric analysis.

424. Problems in Quantitative Analysis. One credit hour. Spring Quarter. One quiz each week. Prerequisite, one Quarter of quantitative analysis. Mr. Foulk.

Simple problems in gravimetric and volumetric analysis.

441-442. Organic Chemistry. Three credit hours. Autumn and Winter Quarters. Three lectures each week. Pre-medical Course, second year. Prerequisite, one year of general chemistry including qualitative analysis. Mr. McPherson.

A general introductory course in organic chemistry arranged primarily for students in Medicine and allied subjects.

444-445. Organic Chemistry. Two credit hours. Autumn and Winter Quarters. Two three-hour laboratory periods each week. Pre-medical course, second year. Prerequisite or concurrent, Chemistry 441-442. Mr. Boord, Mr. Stemen, and assistants.

The preparation of typical organic compounds and their purification. In so far as possible, the compounds prepared are those of interest to medical students.

447-448. Organic Chemistry. Three credit hours. Autumn and Winter Quarters. Three lectures each week. Prerequisite, acceptable courses in general and analytical chemistry. Mr. Boord.

The fundamental course in organic chemistry. The Autumn Quarter is devoted to a discussion of the aliphatic hydrocarbons and their derivatives and the Winter Quarter to a discussion of the coal tar compounds.

449-450. Organic Chemistry: Laboratory. Three credit hours. Autumn and Winter Quarters. Nine laboratory hours each week. Prerequisite or concurrent, Chemistry 447-448. Mr. Boord, Mr. Stemen, and assistants.

The laboratory work naturally belonging with Chemistry 447-448. It consists of the preparation of a series of typical organic compounds, their purification, and a study of their properties.

460. Physical Chemistry. Five credit hours. Spring Quarter. Five lectures or recitations weekly. Prerequisite, an acceptable course in organic chemistry. Mr. Mack, Mr. France.

A brief study of the sum of the fundamental principles of physical chemistry.

FOR ADVANCED UNDERGRADUATES AND GRADUATES

According to the University regulations, courses in this group are not open to Freshmen and Sophomores.

662. Advanced General Chemistry. Three credit hours. Winter Quarter. Three lectures or recitations each week. Prerequisite, acceptable courses in general and analytical chemistry. Mr. France.

An advanced course in general chemistry, stressing the more difficult topics in the elementary courses.

672. Inorganic Preparations. Three credit hours. Spring Quarter. Nine laboratory hours each week. Prerequisite, acceptable courses in general chemistry and quantitative analysis. Mr. Henderson.

Methods employed in the preparation of pure inorganic compounds; the chief classes of such compounds; and the laboratory preparation of a number of examples sufficient to develop reasonable technique in applying the methods and to illustrate the classes.

675. The Phase Rule. Three credit hours. Winter Quarter. Three meetings each week. Prerequisite, Chemistry 681-682-683. Mr. Henderson.

A study of the phase rule and its applications in chemical research.

681-682-683. Physical Chemistry. Three credit hours. Autumn, Winter, Spring Quarters. Three lectures each week. Prerequisites, acceptable courses in analytical and organic chemistry; also an acceptable course in physics, and two Quarters of calculus which may be concurrent. Mr. Mack or Mr. France.

The fundamental course in physical chemistry, arranged for students specializing in chemistry.

691-692-693. Physical Chemistry: Laboratory. Two credit hours. Autumn, Winter, Spring Quarters. Six laboratory hours each week. Prerequisite or concurrent, an acceptable course in physical chemistry. Mr. Mack or Mr. France, and assistants.

An introduction to physicochemical measurements. Any one of these courses may be taken in any Quarter.

699. Minor Problems in Chemistry. Any Quarter. Three to fifteen credit hours. Conference, library, and laboratory work. Prerequisite, satisfactory courses in the field of the problem undertaken. A student may repeat this course and may spend all or any part of his time on it during a Quarter.

This course is designed to permit any properly qualified person to avail himself of the library and laboratory facilities of the department for carrying out a minor investigation or for adding to his knowledge and technique in some chemical subject.

A student may exercise entire freedom in his choice of instructor to conduct his work in this course, but as a rule, topics in organic chemistry will be under the direction of Mr. McPherson, Mr. Evans, Mr. Boord, and Mr. Looker; in inorganic chemistry, under Mr. Henderson, Mr. France, and Mr. Day; in physical chemistry, under Mr. Mack, Mr. France, and Mr. Day; and in analytical chemistry, under Mr. Foulk and Mr. Hollingsworth.

782. Chemical Bibliography. One credit hour. Winter Quarter. One conference each week. Prerequisite, acceptable courses in analytical, and organic chemistry. Mr. Henderson.

Designed to train the advanced student in the use of the chemical library, and to instruct him in the character of various chemical journals, dictionaries, reference books, and other sources of information pertaining to chemical subjects.

783. Chemical Biography. One credit hour. Spring Quarter. One lecture each week. Prerequisite, acceptable courses in analytical, organic, and physical chemistry. Mr. Henderson.

Designed to familiarize the advanced undergraduate student with the leading personages in chemistry, particularly those of recent and contemporary times, as well as with the available sources of information relating to such personages.

NOTE: TEACHING COURSES. For the Teaching Course in this department see the Department of Principles of Education, Course 710.

FOR GRADUATES

An undergraduate student shall not be permitted to take any course in the "800" or "900" group except by permission of the Graduate Council.

822. Seminary in Analytical Chemistry.

841. Advanced Organic Chemistry.

842. Advanced Organic Chemistry.

844. Advanced Organic Preparations: Laboratory.

845. Advanced Organic Preparations: Laboratory.

850. Seminary in Organic Chemistry.

851. Seminary in Organic Chemistry.

852. Seminary in Organic Chemistry.

***853. Seminary in Organic Chemistry.**

861-862-863. Physical Chemistry: Laboratory.

865. Atomic Structure.

* Not given in 1928-1929.

- 866. Seminary in Inorganic Chemistry.
- 867. Seminary in Inorganic Chemistry.
- *881-*882-*883. Advanced Lectures in Physical Chemistry.
- 891. Seminary in Colloid Chemistry.
- 892. Seminary in Physical Chemistry.
- 930. Historical Chemistry.
- 950. Chemical Research.

For description of graduate courses in this department see the Bulletin of the Graduate School.

NOTE: For Industrial Chemistry Courses see the Department of Chemical Engineering.

CIVIL ENGINEERING

Office, 108 Brown Hall

PROFESSOR SHERMAN, MR. WALL

412. Surveying. Five credit hours. Autumn Quarter. Three recitations and two laboratory periods each week. Landscape Architecture, third year. Prerequisite, Mathematics 422 or equivalent. Mr. Wall.

Use of instruments; land surveying; leveling; profiles; elementary topographic surveying.

CLASSICAL LANGUAGES AND LITERATURE

PROFESSORS OGLE, HODGMAN, ELDEN, AND BOLLING, MR. IWANICKI

GREEK

Office, 102 Hayes Hall

401. Elementary Greek. Five credit hours. Autumn Quarter. Five recitations each week. No prerequisite. Mr. Bolling.

This course covers the outlines of the grammar with practice in the translation of simple selections (The First Year of Greek by J. T. Allen).

402. Elementary Greek. Five credit hours. Winter Quarter. Five recitations each week. Prerequisite, Greek 401 or its equivalent. Mr. Bolling.

Reading in Xenophon's Anabasis, review and continuation of the grammar.

403. Plato. Five credit hours. Spring Quarter. Four recitations and one lecture each week. Prerequisite, Greek 402. Mr. Bolling.

Reading in the easier dialogues; the personalities of Socrates and Plato and their work.

404. Homer. Five credit hours. Autumn Quarter. Four recitations and one lecture each week. Prerequisite, Greek 402. Mr. Bolling.

Reading in the Iliad and Odyssey; the epic poetry of Greece.

* Not given in 1928-1929.

FOR ADVANCED UNDERGRADUATES AND GRADUATES

According to the University regulations, courses in this group are not open to Freshmen and Sophomores.

601. Reading and Lectures. Three to five credit hours. One Quarter. Winter and Spring. Three to five meetings each week. Prerequisite, Greek 404 or the permission of the instructor. Mr. Bolling.

Study of the language, style, and works of some author or group of authors, chosen to meet the particular needs of the class. The course may consequently be repeated.

***650. Greek Art.** Three credit hours. Autumn Quarter. Three lectures each week. No prerequisite. Mr. Bolling.

Description and discussion of the monuments of the prehistoric period—the civilization of Crete and Mycene.

651. Greek Art. Three credit hours. Winter Quarter. Three lectures each week. No prerequisite. Mr. Bolling.

The history of Greek vase painting.

652. Greek Art. Three credit hours. Spring Quarter. Three lectures each week. No prerequisite. Mr. Bolling.

The history of Greek sculpture.

NOTE: For Greek 650, 651, and 652 a knowledge of Greek is not required. These courses may be taken in any order, and students below Junior standing may be admitted by special permission.

701. Principles of the Historical Study of Language. Three credit hours. Spring Quarter. Three lectures each week. Mr. Bolling.

The elements of linguistic science together with an outline of the Indo-European family of languages.

720. Historical Greek and Latin Grammar. Three credit hours. Autumn Quarter. Prerequisite, ten credit hours of advanced Greek and Latin. Mr. Bolling.

NOTE: This course is the same as Latin 720.

LATIN

Office, 206 Hayes Hall

401. Elementary Latin. Five credit hours. Autumn Quarter. Five recitations each week. This course is for students who have not studied Latin. Mr. Hodgman, Mr. Iwanicki.

Grammar and exercises.

402. Elementary Latin and Caesar. Five credit hours. Winter Quarter. Five recitations each week. Prerequisite, Latin 401. Mr. Iwanicki.

Continuation of grammar and beginning Caesar.

403. Caesar. Five credit hours. Spring Quarter. Five recitations each week. Prerequisite, Latin 402. Mr. Iwanicki.

Continuation of Caesar.

404. Cicero, Orations. Five credit hours. Autumn Quarter. Five recitations each week. Prerequisites, Latin 401-403 or their equivalent in high school Latin. Mr. Iwanicki.

Three orations.

* Not given in 1928-1929.

405. Vergil. Five credit hours. Winter Quarter. Five recitations each week. Prerequisites, Latin 401-404 or their equivalent in high school Latin. Mr. Elden.

Readings from the Aeneid.

406. Cicero, Horace, Ovid. Five credit hours. Autumn Quarter. Five recitations each week. Prerequisites, Latin 401-405 or three years of high school Latin. Mr. Hodgman, Mr. Ogle.

Cicero, De Senectute; Horace, Odes; Ovid, Metamorphoses.

407. Horace, Livy, Gellius. Five credit hours. Winter Quarter. Five recitations each week. Prerequisite, Latin 406. Mr. Hodgman, Mr. Ogle.

Horace, Odes; Selections from Livy, or Gellius.

408. Latin Comedy. Five credit hours. Spring Quarter. Five recitations each week. Prerequisite, Latin 407. Mr. Hodgman.

Selected plays of Plautus and Terence.

409. Sallust. Five credit hours. Spring Quarter. Five recitations each week. Prerequisite, Latin 405. Mr. Iwanicki.

Sallust, Jugurtha, or Cataline.

This course is not open to students who have credit for Latin 406-407.

501. Catullus, Pliny, Tacitus. Three credit hours. Autumn Quarter. Three recitations each week. Prerequisite, Latin 407. Mr. Elden.

Selections from Catullus, Pliny's Letters, or Tacitus.

This course is not open to students who have credit for Latin 601.

503. Advanced Reading. Three credit hours. Spring Quarter. Three recitations each week. Prerequisite, Latin 408. Mr. Hodgman.

The authors read in this course will be chiefly of the Silver Latin period and will vary from year to year.

This course is not open to students who have credit for Latin 603.

504. Advanced Reading. Three credit hours. Winter Quarter. Three recitations each week. Prerequisite, Latin 501. Mr. Elden.

Selections from Lucretius, Vergil, or Seneca.

This course is not open to students who have credit for Latin 604.

506. Comparative Literature. Three credit hours. Spring Quarter. Three lectures each week. No prerequisites. Mr. Elden.

This consists of lectures on Latin literature and its influence upon the literatures of France, Germany and England. No knowledge of Latin is required, and the course is open to students of both ancient and modern literatures. Students below Junior standing may be admitted by special permission.

This course is not open to students who have credit for Latin 606.

507. Roman Private Life. Three credit hours. Autumn Quarter. Three lectures each week. No prerequisites. Mr. Elden.

Lectures, illustrated with lantern slides on the daily life and customs of the Romans, their business and family relations, their amusements, dress, homes, and household furniture. A knowledge of Latin is not required for this course, and it is open to all students who are interested in the subject. Students below Junior standing may be admitted by special permission.

This course is not open to students who have credit for Latin 607.

508. Roman Art and Archaeology. Three credit hours. Winter Quarter. Three lectures each week. No prerequisites. Mr. Elden.

Lectures, illustrated with lantern slides, on the buildings and monuments of the ancient Roman world, with special reference to the city of Rome and its topography: also the architecture and decorative arts of the Romans, temples, palaces, private and public buildings and their construction. A knowledge of Latin is not required for this course. Students below Junior standing may be admitted by special permission.

This course is not open to students who have credit for Latin 608.

FOR ADVANCED UNDERGRADUATES AND GRADUATES

According to the University regulations, courses in this group are not open to Freshmen and Sophomores.

602. Latin Satire. Three credit hours. Autumn Quarter. Three recitations each week. Prerequisite, Latin 408. Mr. Elden.

Selections from the Satires of Horace or Juvenal.

609. Historical Latin Grammar: Inflections. Three credit hours. Winter Quarter. Three lectures each week. Prerequisite, Latin 503. Mr. Hodgman.

Sounds and inflections, and other topics essential to the understanding of the principles which govern the development of the Latin language. Latin 609 is deemed essential for those who make Latin a major or minor subject of study in graduate work, and is recommended for advanced undergraduate study.

***610. Roman Religion.** Three credit hours. Winter Quarter. Three lectures each week. Prerequisite, six Quarters of college Latin. Mr. Hodgman.

Lectures on the development of Roman religion, with readings from the *Fasti* of Ovid. This course is valuable as supplementing the courses on the life and literature of the Romans.

611. Roman Public Life. Three credit hours. Winter Quarter. Three meetings each week. Prerequisite, four Quarters of college Latin. Mr. Iwanicki.

Lectures and readings in Latin authors illustrating the development of Roman governmental institutions, with special attention to their functions and character during the late republic and early empire.

612. Latin Prose Composition: First Course. Three credit hours. Winter Quarter. Three recitations each week. Prerequisite, six Quarters of college Latin. Mr. Hodgman.

Exercises and lectures on Latin idiom and style.

613. Latin Prose Composition: Second Course. Three credit hours. Spring Quarter. Three recitations each week. Prerequisite, Latin 612. Mr. Hodgman.

A continuation of Latin 612.

***614. Latin Prose Composition: Advanced Course.** Three credit hours. One Quarter. Three recitations each week. Prerequisite, Latin 613. Mr. Hodgman.

A study of the more difficult points of Latin idiom and style.

615. Proseminary, I. Three credit hours. Winter Quarter. Three lectures each week. Prerequisite, six Quarters of college Latin. Mr. Elden.

Lectures on topics suggested by the study of Caesar and Cicero. Roman writing and Roman writing materials; story of the manuscripts; oratory and the orations; Letters of Cicero. Latin 615 is designed especially for students preparing to teach Latin.

* Not given in 1928-1929.

616. Proseminary, II. Three credit hours. Spring Quarter. Three lectures each week. Prerequisite, six Quarters of college Latin. Mr. Elden.

Lectures on the life and works of Vergil, and his influence on modern literature. Latin 616 is designed especially for students preparing to teach Latin.

620. Roman Elegy. Three credit hours. Autumn Quarter. Prerequisites, Latin 501, 503, and 602, or their equivalent. Mr. Ogle.

***621. Roman Tragedy.** Three credit hours. Autumn Quarter. Prerequisites, Latin 501, 503, and 602, or their equivalent. Mr. Ogle.

622. Roman Epic. Three credit hours. Winter Quarter. Prerequisites, Latin 501, 503, and 602, or their equivalent. Mr. Ogle.

***623. Advanced Reading Course in the Post-Augustan Epic.** Three credit hours. Spring Quarter. Prerequisite, either Latin 501, 503, 602, or equivalent. Mr. Elden.

624. Advanced Reading Course in Tacitus. Three credit hours. Spring Quarter. Prerequisite, either Latin 501, 503, 602, or equivalent. Mr. Elden, Mr. Ogle.

625. Advanced Prose Composition. Three credit hours. Spring Quarter. Prerequisite, Latin 612, 613 or their equivalent. Mr. Ogle.

626. Paleography. Three credit hours. Autumn Quarter. Prerequisite, six Quarters of college Latin. Mr. Elden.

Study of the different styles of writing. Textual criticism based largely on Latin manuscripts.

627. Vulgar Latin. Three credit hours. Winter Quarter. Prerequisite, six Quarters of college Latin, or French 801, or the consent of the instructor. Mr. Ogle.

The study of texts and inscriptions illustrating the development of the popular speech.

***629. History of Literary Tradition.** Three credit hours. One Quarter. Prerequisite, Junior standing. Mr. Ogle.

Lectures and discussions dealing with the genesis and development of literary forms and motifs and their tradition down to the rise of modern literatures. The course will be so conducted that students of literature generally will be welcome.

720. Historical Greek and Latin Grammar. Three credit hours. Autumn Quarter. Prerequisite, ten credit hours of advanced Greek and Latin. Mr. Bolling.

NOTE: This course is the same as Greek 720.

NOTE: TEACHING COURSES. For the Teaching Courses in this department see the Department of Principles of Education, Courses 730 and 731.

FOR GRADUATES

An undergraduate student shall not be permitted to take any course in the "800" group except by permission of the Graduate Council.

***801. Seminary in the Latin Epic.**

***802. Seminary in the Latin Epic (Continued).**

* Not given in 1928-1929.

- *803. Seminary in the Post-Augustan Epic.
- *804. Seminary in the Latin Lyric.
- *805. Seminary in the Latin Lyric (Continued).
- 806. Seminary in the Latin Satire.
- *807. Seminary in Latin Historiography.
- 808. Seminary in the Latin Drama.
- 809. Seminary in the Latin Philosophical Writers.
- *810. Seminary in Classical Archaeology.

For description of graduate courses in this department see the Bulletin of the Graduate School.

COMPARATIVE LITERATURE AND LANGUAGE

Courses formerly offered under the above heading will be found under the Departments of Classical Languages and Literature, and German.

DRAWING

(See Engineering Drawing)

ECONOMICS

Office, 116 Commerce Building

PROFESSORS HAMMOND, HAYES, WOLFE, MARK, WALRADT, DICE, AND HELD.
MR. SMART, MISS STITT, MR. BOWERS, MR. DEWEY, MR. WILLIT,
MR. PATTON, AND DEPARTMENT ASSISTANTS

401-402. Principles of Economics. Five credit hours. Two Quarters. Both 401 and 402 are given Autumn, Winter, Spring. Should precede all courses in economics. Not open to Freshmen or Seniors. Mr. Hayes, instructors, and assistants.

A study of the laws of production, exchange, distribution, and consumption of wealth, combined with an analysis of the industrial action of men as regards land, labor, capital, money, credit, rent, interest, wages, etc.

407. Principles of Economics for Students in Home Economics. Five credit hours. One Quarter. Autumn, Winter, Spring. Not open to Freshmen. Miss Stitt.

A survey of the entire field of economics with the needs of women students chiefly in mind. Either this course or 401-402 will meet the requirement in economics for students in Home Economics.

408. American Economic History. Five credit hours. Spring Quarter. Prerequisite or concurrent, a college course in the principles of economics. Mr. Smart.

A survey of the leading facts in our economic development as a people since the settlement of the Colonies. Emphasis will be placed on the rise of our leading industries and of the problems which they have had to face.

412. Industrial Development of Modern Europe. Five credit hours. Winter Quarter. Five recitations each week. Prerequisite or concurrent, a college course in the principles of economics. Mr. Patton.

A survey of the economic changes which have taken place among the advanced industrial nations of Europe since the close of the Seven Years War. Special emphasis

* Not given in 1928-1929.

is placed on the Industrial Revolution, the growth of the factory system, and the accompanying changes in banking, transportation, labor, and industrial combinations.

422. Elementary Economic Statistics. Three credit hours. One Quarter. Autumn, Winter, Spring. Two lectures and one two-hour laboratory period each week. Prerequisites, Economics 401-402 or 403-404, and one unit of high school algebra and one unit of high school geometry. Mr. Smart and assistants.

An introductory course in statistical methods, dealing with the collection, presentation, and analysis of economic and business data. This course will place emphasis on table construction, elementary frequency distributions, graphic charts, averages, ratios and percentages. Some discussion of dispersion and index numbers will be included. Designed for students who have a general interest in elementary statistics. A field problem may be included as a part of the laboratory work.

This course is not open to students who have credit for Economics 622.

FOR ADVANCED UNDERGRADUATES AND GRADUATES

According to the University regulations, courses in this group are not open to Freshmen and Sophomores.

601-602-603. Principles and Problems of Economics. Three credit hours. Autumn, Winter, Spring Quarters. Open only to Seniors and graduate students who consider it advisable to take the course. Mr. Hayes.

A general course covering the entire field of economics intended for those students who plan to do only one year's work in economics or who have not had time or opportunity to do work in this field prior to their fourth year. The scope of the work is the same as in Economics 401-402, but the lectures, readings, and recitations will be suited to the needs of maturer students.

This course is not open to students who have credit for Economics 401-402.

607-608. Financial History of the United States. Three credit hours. Autumn and Winter Quarters. Prerequisite, Economics 401-402. Mr. Walradt.

A study of the fiscal and monetary history of the country from colonial times to the present, with special reference to federal taxation, loans, and financial administration, currency, legislation, and the development of banking institutions.

610. Money and Banking. Five credit hours. One Quarter. Autumn, Winter, Spring. Five recitations each week. Prerequisite, Economics 401-402. Mr. Dice, Mr. Bowers, Mr. Willit.

This course is a general survey of the field of money and banking. It is intended as an introductory study to the more technical courses in banking and finance and also to give a comprehensive view of the field of money and banking for those not primarily interested in the subjects.

Topics taken up are: coinage; the monetary systems of the United States and foreign countries; the gold exchange standard; credit; price levels; the development of banking; the commercial bank; the savings bank; the trust company; the National Banking system; the Federal Reserve system; the interrelations of our financial institutions; and the relation of the financial structure to the business and industrial system.

624. Principles of Insurance. Three credit hours. Autumn Quarter. Three lecture and discussion periods each week. Prerequisite, Economics 401-402. Mr. Bowers.

Risk; uses of insurance; kinds of insuring organizations; agency organization; underwriters' associations. Life insurance: kinds of policies and their uses; premiums; expenses; reserves; surrender values and loans; surplus and dividends; policy clauses;

special forms of life insurance. Accident and health insurance. Fire insurance; insurable interest; protection of creditors; provisions of the standard policy and the principal standard indorsements; rate-making; reserves; settlement of losses. Marine, automobile, title and credit insurance; corporate bonding. State supervision.

This course is not open to students who have credit for Business Organization 760.

631. Public Finance. Three credit hours. Autumn Quarter. Prerequisite, Economics 401-402. Mr. Walradt.

A study of the problems connected with the debts, expenditures, revenues, and fiscal administration of national, state, and municipal governments.

632. Public Finance. Three credit hours. Winter Quarter. Prerequisite, Economics 631. Mr. Walradt.

A continuation of Economics 631.

633. Public Finance. Three credit hours. Spring Quarter. Prerequisite, Economics 632. Mr. Walradt.

A continuation of Economics 632.

637. Industrial Relations. Three credit hours. Autumn Quarter. Prerequisite, ten hours in the principles of economics. Mr. Bowers.

The labor movement. Trade unions and employers' associations; their origin, growth, policies, and methods. Industrial disputes and modes of settling them; mediation, conciliation, and arbitration. Governmental intervention and its success at home and abroad. The recent movement to secure for labor a participation in the management of industry and to increase the interest of labor in the work of production.

638. Labor Legislation. Three credit hours. Winter Quarter. Prerequisite, ten hours in the principles of economics. Miss Stitt.

Efforts on the part of government to improve the condition of the laboring class and to increase the bargaining power of labor. The theory of the legal regulation of labor legislation and court decisions. Child labor and its legal prohibition or restriction. The legal regulation of the employment of women in industry. The problem of low-paid labor and the legal minimum wage. The working day and the legal regulation of hours of labor. Efforts to secure by law safe and sanitary conditions for workers in factories, tenements, mines, and in transportation. The administration of labor laws.

639. Social Insurance. Three credit hours. Spring Quarter. Prerequisite, Economics 638 or 624. Mr. Bowers.

Recent efforts at home and abroad to guarantee to the worker financial security against the hazards of industry. Accident insurance; employers' liability and workmen's compensation. Industrial health hazards and health insurance. Old age and invalidity insurance or pensions. The problem of unemployment and its prevention. Employment agencies, private and public. The regularization of employment; unemployment insurance.

643. Women in Industry. Four credit hours. Autumn Quarter. Four recitations each week. Prerequisite, Economics 401-402, or Sociology 401-402, or 403-404. Miss Stitt.

A study of the economic position of women. Social, industrial, and legislative problems created by their entrance into the field of industry. A survey of the occupations open to trained women.

644. The Standard of Living. Three credit hours. Spring Quarter. Three recitations each week. Prerequisite, Sociology 401-402, or 403-404, or Economics 401-402. Home Economics 609 should be taken with this course. Miss Mark.

A consideration of the content of the various standards of living in American society. Their economic and social significance. Problems in family budgets and retail buying.

651. International Commercial Policies. Three credit hours. Spring Quarter. Prerequisite, Economics 401-402. Mr. Held.

The theory of international trade; historic policies; mercantilism; free trade and protection. A study of the tariff policy of the United States with a comparative study of the policies of other countries. International trade as affected by the World War.

658-659-660. Population. Two credit hours. Autumn, Winter, Spring Quarters. Prerequisite, Economics 401-402. Mr. Wolfe.

A general survey of the facts and problems of the growth and distribution of population. The relation of numbers to resources, productive capacity, standard of living, and prosperity. Population in relation to international economic problems. The dynamic aspects of population in relation to material and moral progress. Critical consideration of population theories and policies.

FOR GRADUATES

An undergraduate student shall not be permitted to take any course in the "800" group except by permission of the Graduate Council.

801-802-803. History of Economic Thought.

804-805-806. Economic History of the United States.

807-808-809. Statistical Analysis.

***810-*811. Principles of Economics for College Teachers.**

816-817-818. Modern Economic Theories.

†819-*820-*821. French and German Economics.

822-823-824. Seminary in Economics and Statistics.

828-829-830. Research in Labor Problems and Legislation.

831-832-833. Railroad Rates and Rate Control.

835-836-837. Theories of Public Utility Rates in Europe and the United States.

839-840-841. Research in Corporation Economics and Trust Problems.

845-846-847. Research in Money and Banking.

851-852-853. Research in Public Finance.

854-855-856. Research in Theories and Problems of International Trade.

857-858-859. Research in Economic Theory.

860-861-862. Research in Statistics.

For description of graduate courses in this department see the Bulletin of the Graduate School.

* Not given in 1928-1929.

† Not given during the academic year 1928-1929.

EDUCATIONAL NURSING
(See Public Health)

ENGINEERING DRAWING

Office, 218 Brown Hall

PROFESSORS FRENCH, MEIKLEJOHN, TURNBULL, AND WILLIAMS, ASSISTANT
PROFESSORS FIELD, PAFFENBARGER, AND RUSS, MR. McMAN-
IGAL, MR. COOPER, MR. LUTZENBERGER, MR.
JONES, AND DEPARTMENT ASSISTANTS

401. Principles of Engineering Drawing. Four credit hours. One Quarter. Autumn and Winter. One lecture and four two-hour laboratory periods each week. All instructors.

Orthographic projection, auxiliary projection, sections, applied geometry, lettering.

402. Principles of Engineering Drawing. Four credit hours. One Quarter. Winter and Spring. One lecture and four two-hour laboratory periods each week. Prerequisite, Engineering Drawing 401. All instructors.

Intersections, developments, working drawings, isometric and other pictorial representation, lettering.

403. Descriptive Geometry. Four credit hours. Spring Quarter. Four two-hour periods each week for lecture and laboratory. Prerequisite, Engineering Drawing 402. All instructors.

421. Engineering Drawing. Three credit hours. Autumn Quarter. One lecture and three two-hour laboratory periods each week. Prerequisite, Engineering Drawing 403. Mr. Russ, Mr. Cooper.

429. Principles of Engineering Drawing. Five credit hours. Spring Quarter. One lecture and twelve laboratory hours each week. Landscape Architecture, first year. Mr. Turnbull.

436. The Teaching of Engineering Drawing. Five credit hours. Winter Quarter. One lecture, one quiz, and three three-hour laboratory periods each week. Required in Industrial Arts Education. Prerequisite, Engineering Drawing 401. Mr. McManigal.

437. Projection Drawing. Two credit hours. One Quarter. Autumn and Spring. Six laboratory hours each week. Home Economics, second year. Mr. Field.

438. House Planning. Three credit hours. Winter Quarter. One lecture and six laboratory hours each week. Home Economics, third year. Prerequisite, Engineering Drawing 437. Mr. Field.

NOTE: TEACHING COURSES. For the Teaching Courses in this department see the Department of Principles of Education, Courses 750 and 751.

ENGLISH

Office, 103 Mendenhall Laboratory

PROFESSORS DENNEY, TAYLOR, McKNIGHT, GRAVES, KETCHAM, BECK, ANDREWS, AND PERCIVAL, ASSISTANT PROFESSORS HARBARGER, WILEY, AND WALLEY, MR. CRAIG, MISS SNIFFEN, MR. MILLER, MISS ROBINSON, MRS. RHODES, MRS. HITCHCOCK, MR. FULLINGTON, MR. HATCHER, MR. WILSON, MR. OWSLEY, MR. EMSLEY, MR. NESBITT, MR. POLLOCK, MR. FRIERSON, MR. EDWARDS, MR. GRAHAM, MR. HABER, MR. CHALFANT, MISS DENTON, MR. ROSS, MR. SNYDER, MR. KERR, MR. LANDIS, MRS. BUCK, AND DEPARTMENT ASSISTANTS

NOTE: Freshmen are restricted to English 401 and 433. Courses designed for the second year are: 441, 442, 405, 407, 427, 428, 429, 446.

(a) Courses in writing should be chosen in the following order: 401, 405, 407, 643, 657, 658.

(b) Courses in literature should be chosen in the following order: 433, 446, 441, 442, 636, 639, 653, 655, 656, 659, 667, 668, 670, 672.

(c) Courses in language should be chosen in the following order: 427, 428, 651, 652, 646.

Some deviations from this order and some omissions are permitted in each group.

401. Composition and Reading. Five credit hours. One Quarter. Autumn, Winter, Spring. Five hours of recitation, quiz, reading and practice each week. Required in the College of Education. No prerequisite. Mr. Beck and instructors.

405. Theme Writing. Five credit hours. One Quarter. Autumn, Winter, Spring. Five hours of recitation, quiz, reading, and practice each week. Prerequisites, English 401 and 433. Mr. Beck, Mr. Craig.

407. Advanced Composition. Five credit hours. Autumn Quarter. Five hours of lecture, quiz, reading, and practice each week. Prerequisite, four Quarters in English. Special permission necessary. Class enrollment limited to thirty. Mr. Graves.

410. English Composition. Three credit hours. One Quarter. Autumn and Winter. Three hours of quiz, reading, and practice in composition, and six hours of preparation each week. Landscape Architecture, first year. No prerequisite. Miss Harbarger, Mrs. Rhodes, Mrs. Hitchcock, Mr. Nesbitt, Mr. Snyder.

Stress is laid upon the mechanics of writing. One long paper during the Quarter—autobiography and informal exposition. Frequent short papers. Outside reading—a selected biography or autobiography. Personal conferences.

This course is not open to students who have credit for English 401.

411. English Composition. Three credit hours. One Quarter. Winter and Spring. Three hours of quiz, reading, and practice in composition, and six hours of preparation each week. Landscape Architecture, first year. Prerequisite, English 410. Miss Harbarger, Mrs. Rhodes, Mrs. Hitchcock, Mr. Nesbitt, Mr. Snyder.

This course is a continuation of English 410. Emphasis is placed upon the use of the library, and argumentation. One long argument during the Quarter. Frequent short papers. Outside reading—selected short stories. Personal conferences.

This course is not open to students who have credit for English 401.

412. English Composition. Three credit hours. One Quarter. Autumn and Spring. Three hours of quiz, reading, and practice in composition, and six hours of preparation each week. Landscape Architecture, first year. Prerequisites, English 410 and 411. Miss Harbarger, Mrs. Rhodes, Mrs. Hitchcock, Mr. Nesbitt, Mr. Snyder.

This course is a continuation of English 411. Emphasis is placed upon the forms of technical writing. One long technical paper, frequent short papers. Outside reading—selected poems, essays and plays.

This course is not open to students who have credit for English 405 or 407.

427. History of the English Language. Three credit hours. Winter Quarter. Lectures, quiz, and reports. Prerequisite, English 401. Mr. McKnight.

Especial attention is paid to the modern period. to the history of pronunciation and spelling and the development of the rules which govern modern English usage.

428. English Words. Three credit hours. One Quarter. Autumn and Spring. Prerequisite, English 401. Mr. McKnight.

A consideration of words, their sources, their uses, and the way modern meanings have been arrived at.

429. The English Bible. Five credit hours. One Quarter. Autumn, Winter, Spring. Five hours lecture, quiz, readings each week. Prerequisites, English 401 and 433. Mr. Hatcher.

433. Introduction to American Literature. Five credit hours. One Quarter. Autumn, Winter, Spring. Lectures, quiz, readings, reports. No prerequisites. Mr. Graves, Mr. McKnight, Mr. Beck, Mr. Walley, Mr. Craig, Miss Robinson, Miss Sniffen, Mr. Fullington, Mr. Wilson, Mr. Owsley, Mr. Emsley, Mr. Pollock, Mr. Frierson, Mrs. Buck.

The outline of the history will be given by lecture. The reading and criticism will be of Irving, Cooper, Bryant, and Poe; of Hawthorne, Emerson, Whittier, Longfellow, and Lowell; and of Walt Whitman; with a brief survey of recent literature.

441. Nineteenth Century Poetry: Romantic. Five credit hours. One Quarter. Autumn, Winter, Spring. Lectures, quiz, readings. Prerequisites, English 401 and 433. Mr. Taylor, Mr. Percival, Mr. Walley, Mr. Frierson.

Wordsworth, Shelley, Keats, and their contemporaries.

442. Nineteenth Century Poetry: Victorian. Five credit hours. One Quarter. Autumn, Winter, Spring. Lectures, quiz, readings. Prerequisites, English 401 and 433. Mr. Taylor, Mr. Andrews, Mr. Percival, Mr. Walley.

Reading and criticism as far as possible complete of Tennyson and Browning. Some initial consideration will be taken of Fitzgerald, Arnold, Swinburne, Rossetti, Morris, and Meredith.

446. Nineteenth Century Prose. Five credit hours. One Quarter. Autumn, Winter, Spring. Lectures, quiz, readings. Prerequisites, English 401 and 433. Mr. Denney, Miss Sniffen, Mr. Miller, Mr. Fullington.

Reading in Coleridge, Lamb, Landor, DeQuincey, Hazlitt, Carlyle, Arnold, Ruskin, Newman, Pater, Stevenson and in recent and contemporary essayists.

FOR ADVANCED UNDERGRADUATES AND GRADUATES

According to the University regulations, courses in this group are not open to Freshmen and Sophomores.

636. Eighteenth Century Poetry and Prose. Five credit hours. Autumn Quarter. Lectures, quiz, readings. Prerequisite, four Quarters in English. Mr. Percival.

A study of the classical, romantic, realistic and sentimental literature of the eighteenth century. Representative prose, poetry, and drama. Especial attention will be given to a study of the life and times of Dr. Samuel Johnson.

639. The Essay. Five credit hours. Spring Quarter. Lectures, critical study, quiz. Prerequisite, five Quarters in English. Mr. Beck. The origin and development of the English essay as a literary type.

643. Literature and Composition. Five credit hours. Spring Quarter. Three lectures with conferences on individual work each week. Prerequisite, at least six Quarters in English. Special permission necessary. Mr. Andrews.

Recent writers, Kipling, Wilde, Wells, Shaw, Butler, Aldous Huxley, Chesterton, Masfield, and a few others will be read and discussed as a basis for creative and critical writing. Conferences on individual work.

646. Middle English. Three credit hours. Spring Quarter. Prerequisites, English 651 and 652. Mr. Emsley.

Grammar and reading of selected texts.

651. Old English. Three credit hours. Autumn Quarter. Lectures, quiz, readings. Prerequisite, four Quarters in English. Mr. Emsley.

Grammar and reading of selected texts.

652. Old English Poetry. Three credit hours. Winter Quarter. Prerequisite, English 651. Mr. McKnight.

Beowulf and other assigned texts.

653. Chaucer and His Principal Contemporaries and Successors. Five credit hours. Winter Quarter. Lectures, quiz, readings. Prerequisite, five Quarters in English. Italian 609 and 610 are recommended as concurrent studies. Class enrollment limited to thirty. Mr. McKnight.

Chaucer's principal works are read. Consideration is also given to Gower, Wycliffe, Langland, the author of Sir Gawayne and the Grene Knight, Occleve, Lydgate, Barbour, James I of Scotland, Dunbar, etc.

654. English Medieval Literature to Chaucer. Five credit hours. Autumn Quarter. Lectures, quiz, readings. Prerequisite, five Quarters in English. Mr. McKnight.

A study of epic poetry in early English, followed by a study of legends, romances, tales, and metrical histories, all done by means of modern English renderings.

655. The Novel: Richardson to Scott. Five credit hours. Winter Quarter. Lectures, quiz, readings. Prerequisite, five Quarters in English. Mr. Taylor.

The history and development of the novel in this period is given by lecture. Reading and criticism of Richardson, Fielding, Sterne, Jane Austen, and Scott.

656. The Novel: Dickens to Meredith. Five credit hours. One Quarter. Autumn and Spring. Lectures, quiz, readings. Prerequisite, five Quarters in English. Mr. Taylor.

The history and development of the novel in this period is given by lecture. Reading and criticism of Dickens, Thackeray, Trollope, George Eliot, Meredith, Hardy, and James.

657. Versification. Five credit hours. Winter Quarter. Lectures, reading, practice. Prerequisite, four Quarters in English including one Quarter-course in poetry. Open only to Juniors and Seniors. Special permission necessary. Class enrollment limited to thirty. Mr. Graves.

The theory of verse structure with a history of the principal English rhythms, and practice in verse composition.

658. The Short Story. Five credit hours. Winter Quarter. Lectures, quiz, readings. Prerequisite, four Quarters in English including English 405 or 407. Open only to Juniors and Seniors. Special permission necessary. Class enrollment limited to thirty. Mr. Graves.

Lectures on structure and form in the short story, with class reports on assigned readings, and practice in story writing.

659. Milton and Dryden. Five credit hours. Autumn Quarter. Four meetings each week and a fifth meeting at the option of the instructor. Prerequisite, six Quarters in English. Mr. Andrews.

Seventeenth century literature with special reference to Milton. The poetry of Milton, Donne, the Cavaliers, the church poets, and Dryden. The prose of Walton and the character books: Browne, Burton, and Bunyan. The Restoration dramatists.

664. The Celtic Renaissance. Five credit hours. Spring Quarter. Four meetings each week and a fifth meeting at the option of the instructor. Class enrollment limited to twenty. Mr. McKnight.

Subjects for study: The Ossianic literature of the eighteenth century, Lady Guest's translation of the Welsh *Mabinogion* and the English literary works inspired by the translation. The modern revival of ancient Irish story and the related modern literature by Yeats, Lady Gregory, Fiona Macleod, Synge, and others.

This course is not open to students who have credit for English 813.

667. Shakespeare: Histories and Tragedies. Five credit hours. Autumn Quarter. Two lectures, two quiz hours, one hour written criticism each week. Prerequisite, five Quarters in English. Italian 609 and 610 are recommended as concurrent studies. Mr. Denney.

668. Shakespeare: Comedies and Romances. Five credit hours. Winter Quarter. Two lectures, two quiz hours, one hour written criticism each week. Prerequisite, five Quarters in English. Italian 609 and 610 are recommended as concurrent studies. Mr. Denney.

670. Recent and Contemporary Drama. Five credit hours. Winter Quarter. Four meetings each week with special reading in lieu of the fifth meeting. Prerequisite, English 667 or 668. Mr. Andrews.

One or two plays of each of the leading dramatists since Ibsen will be read, the foreign plays in translation. The authors considered will be Ibsen, Strindberg, Hauptmann, Suderman, Schnitzler, Brieux, Hervieu, Wilde, Pinero, Jones, Barker, Galsworthy, Shaw, Rostand, Maeterlinck, Yeats, Synge.

672. Shakespeare's Contemporaries and Predecessors in English Drama. Five credit hours. Spring Quarter. Four meetings each week

and a fifth meeting at the option of the instructor. Prerequisite or concurrent, English 667 and 668. Class enrollment limited to thirty. Mr. Denney.

674. Spenser. Five credit hours. Winter Quarter. Lectures, readings, reports. Prerequisite, five Quarters in English. Mr. Hatcher.

A study of non-dramatic Elizabethan literature. Spenser, the development of the Elizabethan lyric, the sonnet sequences, the translations, the prose of Lyly, Sidney, Lodge, Green, Nash.

675. Play Production. Five credit hours. Winter Quarter. Open to Seniors by special permission. Mr. Miller.

Lectures and readings on the organization of little theatre groups and the staging of plays.

705. Honors Course. Three credit hours. Autumn Quarter. A program of reading arranged for each student, with individual conferences and reports. Prerequisites: (1) full Senior standing; (2) the record of "A" in at least half of his English courses and an average of "B" in the remainder; (3) the special permission of the professor under whose supervision the work is desired, and permission of the Department Committee on Honors. All instructors.

706. Honors Course. Three credit hours. Winter Quarter. A program of reading arranged for each student, with individual conferences and reports. Prerequisites: (1) full Senior standing; (2) the record of "A" in at least half of his English courses and an average of "B" in the remainder; (3) the special permission of the professor under whose supervision the work is desired, and permission of the Department Committee on Honors. All instructors.

707. Honors Course. Three credit hours. Spring Quarter. A program of reading arranged for each student, with individual conferences and reports. Prerequisites: (1) full Senior standing; (2) the record of "A" in at least half of his English courses, and an average of "B" in the remainder; (3) the special permission of the professor under whose supervision the work is desired, and permission of the Department Committee on Honors. All instructors.

NOTE: TEACHING COURSES. For the Teaching Courses in this department see the Department of Principles of Education, Courses 715 and 717.

FOR GRADUATES

An undergraduate student shall not be permitted to take any course in the "800" group except by permission of the Graduate Council.

801. History of the Short Narrative in English.

802. The Lyric.

805. Studies in Criticism.

806. Problems in Comedy.

807. The Novel: End of the Nineteenth Century.

808. Poetry: End of the Nineteenth Century.

809. The Twentieth Century Realistic Novel: Considered in Relation to its Origins, English and French.

- 810. English Usage.
- 811. Studies in the Period of Chaucer.
- 815. Studies in Seventeenth Century Literature.
- 816. Studies in Poetic Rhythm.
- 817. Studies in the Romantic Movement.
- 818. Studies in Eighteenth Century Literature.
- 819-820-821. Discussion of Dissertations.
- 822. Play Writing.

For description of graduate courses in this department see the Bulletin of the Graduate School.

PUBLIC SPEAKING

401. Principles and Practice of Public Speaking. Five credit hours. One Quarter. Autumn, Winter, Spring. Prerequisite, English 401. Mr. Ketcham, Mr. Wiley, Mr. Ross, Miss Denton.

The principles of public speaking. The methods of securing the attention and maintaining the interest of an audience. Practice in the application of principles and methods to simple expository and argumentative addresses.

402. Debating. Five credit hours. One Quarter. Autumn, Winter, Spring. Prerequisite, English 401. Mr. Wiley, Miss Denton, Mr. Glander.

Practice in making and presenting oral arguments. The theory and practice of argumentation and debate. Short class debates on subjects of current interest.

407. Advanced Argumentation and Debate. Five credit hours. One Quarter. Autumn and Spring. Prerequisite, ten hours in public speaking. Mr. Ketcham.

A study of the great political and legal debates. Special applications of logic to argument. Practice in drawing briefs and presenting oral arguments on political and legal problems.

410. Advanced Debate Practice. Five credit hours. One Quarter. Autumn and Winter. Two practice periods each week. Special permission necessary. Mr. Wiley, Miss Denton, Mr. Gray, Mr. Glander.

An advanced course for students who show special ability in debate.

414. Extempore Speaking. Five credit hours. Winter Quarter. Prerequisite, ten hours in public speaking. Mr. Wiley.

Practice in gathering and arranging speech material for extemporaneous addresses. Special exercises for developing clearness, concreteness, connotation, unity, and movement in extemporaneous speaking.

421. Masters of Public Address. Five credit hours. Winter Quarter. Lectures, readings, and oral reports. Prerequisite or concurrent, Public Speaking 401-402.

Consideration will be given to the life of the speaker, the events leading up to his principal public addresses, his subject matter and its treatment and his influence. The studies will include Demosthenes, Cicero, Burke, Erskine, Gladstone, Henry, Webster, Clay, Calhoun, Lincoln, Beecher, Phillips, Bryan, Wilson, and Lloyd George.

459. Principles and Practice of Oral Reading. Three credit hours. Winter Quarter. Three recitation periods each week. Prerequisite for

Principles of Education 715, and so required of all students in the College of Education majoring in English. Credited toward professional requirement (See page 37). Mr. Wiley.

Selections of prose and verse read in class by student. Attention paid to voice, action, and interpretation of subject matter. Some drill in phonetics. A course in the fundamentals of delivery. Critical emphasis put on conversational directness, physical energy, intellectual enthusiasm and sincerity.

NOTE: A speech test will determine who shall take and who may be excused from this course. This speech test will be given by the Division of Public Speaking each Autumn Quarter. Students required to take Public Speaking 459 are requested to obtain a letter of instructions and make appointment for this test with the Department of English, Room 103, Mendenhall Laboratory, during the first week of the Autumn Quarter.

FOR ADVANCED UNDERGRADUATES AND GRADUATES

According to the University regulations, courses in this group are not open to Freshmen and Sophomores.

625. The Forms of Public Address. Five credit hours. Spring Quarter. Prerequisite, Public Speaking 401-402. Mr. Ketcham.

A study of the methods of the foremost American and English orators. Class discussions. Practice in the use of different forms of public address. Formal orations; inaugurals; nominating speeches; after-dinner speaking; discussions of current events; political, business, and social addresses.

This course is not open to students who have credit for Public Speaking 525.

651. Special Problems in the Theory of Public Speaking. Five credit hours. Spring Quarter. Prerequisite, ten hours in public speaking. Mr. Ketcham.

The function of the public speaker in reforms, revolutions, and public movements. Criticism and appreciation. Ideals, aesthetic standards in public speaking. Each student is required to make investigations in some special problem and to bring his results before the class for discussion.

NOTE: TEACHING COURSES. For the Teaching Courses in this department see the Department of Principles of Education, Courses 717 and 760.

ENTOMOLOGY

(See Zoology and Entomology)

EUROPEAN HISTORY

(See History)

FINE ARTS

Office, 201 Hayes Hall

PROFESSORS HOPKINS, FANNING, AND LYNCH, ASSISTANT PROFESSOR ROBINSON, MISS LAZENBY, MR. FREY, MR. LEWIS, MR. WISER, MR. RANNELLS, MISS DE BRA, MISS WALKER, MR. CHURCH, AND

DEPARTMENT ASSISTANTS

NOTE: For special courses in Fine Arts for students in Architecture and Architectural Engineering see the Bulletin of the College of Engineering.

401-402-403. Freehand Drawing. Two credit hours. Autumn, Winter, Spring Quarters. Two three-hour laboratory periods each week. Landscape Architecture, first year. Mr. Lewis.

An elementary course in the principles and practice of expression by freehand drawing. Emphasis upon proportion, perspective, and values in monochrome.

404-405. Advanced Freehand Drawing. Two credit hours. Autumn and Winter Quarters. Two three-hour laboratory periods each week, with weekly problems. Landscape Architecture, second year. Prerequisite, Fine Arts 401-402-403. Miss Robinson, Mr. Rannells.

407. Water Color Painting. Two credit hours. Spring Quarter. Two three-hour periods each week. Landscape Architecture, second year. Prerequisite, Fine Arts 404-405. Mr. Fanning.

Painting from still life, models, and landscape with special regard for the technique useful for the architectural rendering. Lectures, laboratory work, and criticisms.

408. Water Color Painting. Three credit hours. Autumn Quarter. Two three-hour periods each week, with weekly problems. Landscape Architecture, third year. Prerequisite, Fine Arts 407. Mr. Fanning.

Painting from still life, models, and landscape with special regard for the technique useful for the architectural rendering. Lectures, laboratory work, and criticisms.

411-412. Drawing from Life. Three credit hours. Winter and Spring Quarters. Two three-hour periods each week, with outside problems. Landscape Architecture, third year. Prerequisite, Fine Arts 404-405. Mr. Wiser.

Drawing from the living model with lectures and problems in surface anatomy.

421. Elementary Freehand Drawing. Five credit hours. One Quarter. Autumn, Winter, Spring. Five two-hour laboratory periods each week. Ceramic Art, first year. Miss Walker, Mr. Lewis, Mr. Rannells, Mr. Frey, and assistants.

A technical course in the principles of drawing, with special regard for directness and facility. Practice in freehand perspective and values in monochrome. Clay and modelling.

423. Advanced Freehand Drawing. Five credit hours. One Quarter. Autumn, Winter, Spring. Four three-hour laboratory periods each week, with weekly problems. Ceramic Art, second year. Prerequisite, Fine Arts 421 or 401-402-403. Miss Robinson, Mr. Rannells, Mr. Lewis.

Drawing from still life and the antique as a means of expression, emphasizing the various possibilities and limitations of the black and white mediums, with problems in composition.

424. Drawing from Life. Five credit hours. One Quarter. Autumn, Winter, Spring. Four three-hour periods each week, with weekly problems. Ceramic Art, third year. Prerequisite, Fine Arts 423. Mr. Wiser.

Drawing from the living model with lectures and problems in surface anatomy.

425. Advanced Life Drawing. Five credit hours. One Quarter. Autumn, Winter, Spring. Four three-hour periods each week with weekly problems. Prerequisite, Fine Arts 424. Mr. Wiser.

Drawing from life with lectures and problems in figure composition.

426. Elements of Art. Five credit hours. One Quarter. Autumn, Winter, Spring. Two lectures and three two-hour laboratory periods each week. Home Economics, first year. Open only to Home Economics

students in the Colleges of Agriculture and Education. Miss Robinson, Miss Walker, and assistants.

Study of the art expression of different peoples. Experiments in design, in line, form, and color. Problems related to the course of study of the Home Economics student.

431. Elementary Design. Five credit hours. One Quarter. Autumn, Winter, Spring. Two lectures and three two-hour laboratory periods each week. Ceramic Art, second year. Prerequisite, Fine Arts 423 or equivalent. Miss DeBra, Miss Walker.

The principles of pure design, with practice in the presentation of organic design problems. Lectures, conferences, and technical work.

432. Intermediate Design. Five credit hours. One Quarter. Autumn and Winter. Three three-hour periods each week, with outside requirements. Ceramic Art, second year. Prerequisite, Fine Arts 431. Miss DeBra, Miss Walker.

Special problems in design, theory, and presentation. Ceramic, textile, metallic, stone, wood, and combined materials are considered for decorative and structural elements.

433. Commercial Design. Five credit hours. Winter Quarter. Three three-hour periods each week, with weekly problems. Prerequisites, Fine Arts 432 and 424. Mr. Wiser, Mr. Lewis.

A technical study of design from the commercial standpoint: advertising, posters, printing, etc.

434. Thesis Design. Five credit hours. One Quarter. Winter and Spring. Ceramic Art, third year. Prerequisites, Fine Arts 424 and 432. To be arranged with the department. Mr. Hopkins, Mr. Fanning, Miss Robinson.

Individual attention to the solution of problems requiring a specialized study in one of the various fields of design.

435. Illustrative Drawing. Five credit hours. One Quarter. Autumn and Spring. Prerequisites, Fine Arts 425, and 441 or 442. Mr. Wiser.

Practice in illustrative drawing with study of the technique of pen and ink, pencil, wash, and other mediums. Problems in pictorial composition.

436. Elements of Art: Advanced. Three credit hours. One Quarter. Autumn, Winter, Spring. Three two-hour laboratory periods each week. Prerequisites, Fine Arts 426 or 421 and 431. Miss Walker.

Fine arts in relation to dress and house problems. Drawings, criticisms, readings, and lectures.

441. Water Color Painting. Five credit hours. One Quarter. Autumn and Spring. Three three-hour periods each week, with weekly problems. Ceramic Art, third year. Prerequisite, Fine Arts 431. Miss DeBra.

Painting from still life, models, and landscape. The purpose of this course is to develop the color sense and ability in the technique of water color painting. Lectures, laboratory work, and criticism.

442. Oil Painting. Five credit hours. One Quarter. Autumn, Winter, Spring. Four three-hour periods each week, with weekly problems. Prerequisite, Fine Arts 431. Mr. Hopkins.

Painting from still life with the object of developing the color sense and acquiring directness of presentation. Problems in the organization and execution of pictures.

443. Advanced Oil Painting. Five credit hours. One Quarter. Autumn, Winter, Spring. Prerequisite, Fine Arts 442. Mr. Hopkins.

Painting in oil from still life and the costume model. Advanced problems in picture making.

444. Advanced Water Color Painting. Five credit hours. One Quarter. Autumn and Spring. Three three-hour periods each week, with weekly problems. Prerequisite, Fine Arts 441. Miss DeBra.

A continuation of Fine Arts 441, with advanced problems in picture making.

451. History of Classic Art. Five credit hours. Autumn Quarter. Five lectures each week. Ceramic Art and Landscape Architecture, second year. Not open to Freshmen. Mr. Fanning.

The study of the art of Greece and Rome, with some consideration of Egypt, Mesopotamia, and Crete. Illustrated lectures, reading, and reports.

452. History of Medieval Art. Five credit hours. Winter Quarter. Five lectures each week. Ceramic Art and Landscape Architecture, second year. Prerequisite, Fine Arts 451. Not open to Freshmen. Mr. Fanning.

From the origins of Christian Art in Rome to the end of the Gothic Period. Illustrated lectures, reading, and reports.

453. History of Renaissance Art. Five credit hours. Spring Quarter. Five lectures each week. Ceramic Art and Landscape Architecture, second year. Prerequisite, Fine Arts 451. Not open to Freshmen. Mr. Fanning.

From the beginning of the Renaissance in Italy to the beginning of modern tendencies in Art in the seventeenth century. Illustrated lectures, reading, and reports.

454. History of Modern Art. Five credit hours. Spring Quarter. Five lectures each week. Not open to Freshmen or Sophomores. Miss Robinson.

Painting and sculpture from the eighteenth century to the present day. Lectures, reading, and reports.

461. Modelling. Five credit hours. One Quarter. Autumn, Winter, Spring. Three three-hour laboratory periods each week, with weekly problems. Ceramic Art, third year. Prerequisite, Fine Arts 421. Mr. Frey.

This course includes the principles of cast making with practice.

462. Advanced Modelling. Five credit hours. One Quarter. Autumn, Winter, Spring. Three three-hour laboratory periods each week. Ceramic Art, third year. Prerequisite, Fine Arts 461. Mr. Frey.

465-466-467. Technical Problems. Three to five credit hours. Autumn, Winter, Spring Quarters. Ceramic Art, third year. Landscape Architecture, fourth year. Mr. Hopkins, Mr. Fanning, Miss Lazenby.

This course is open, by permission of the department, to students who show particular ability in design, drawing, painting or sculpture, and who, having completed the other technical courses offered in the department, wish to pursue advanced problems in these fields under the supervision of the department. Students majoring in Landscape Architecture take special problems in planting design under these courses.

470. Art Problems for Elementary Teachers. Five credit hours. Autumn Quarter. Three lectures and two two-hour laboratory periods each week. Miss Robinson.

A study of the nature of art expression with laboratory experiments in design

and freehand drawing. This course is open only to students who intend to be teachers in the elementary schools. Special stress will be laid on the use of the blackboard in freehand drawing and on problems in design.

471. The Theory and Practice of Teaching Art. Five credit hours. Autumn Quarter. Five periods each week with outside assignments. Prerequisites, Fine Arts 421 and 431. This course is prerequisite to Principles of Education 440 for all students majoring in Fine Arts. Miss Robinson.

A study of general and special methods. Observation and criticism of high school teaching.

476. Appreciation of the Plastic Arts. One credit hour. Autumn Quarter. Mr. Fanning.

A series of twelve lectures planned to give the layman an intelligent appreciation of architecture and sculpture.

477. Appreciation of the Pictorial Arts. One credit hour. Winter Quarter. Mr. Fanning.

A series of twelve lectures planned to give the layman an intelligent appreciation of painting and pictures.

478. Appreciation of the Popular Arts. One credit hour. Spring Quarter. Mr. Fanning and others.

A series of twelve lectures planned to give the layman an intelligent appreciation of the popular art expressions of the day.

480. Ceramic Products. Five credit hours. Autumn Quarter. Ceramic Art, third year. Prerequisites, Fine Arts 431 and Ceramic Engineering 405.

A study of products of clay, glass, and glass enamel, stressing design, finish, and quality in relation to service specifications. Industrial processes are described with special reference to methods and equipment of the artist.

481. Ceramic Composition and Decorative Processes. Five credit hours. Winter Quarter. Lectures and laboratory. Ceramic Art, third year. Prerequisite, Fine Arts 480.

A review of the material mixtures and of the decorative processes employed and an historical classification of ceramic design.

482. Ceramic Shape Designing. Five credit hours. Spring Quarter. Ceramic Art, third year. Prerequisite, Fine Arts 481.

A laboratory course in modelling, making of molds, and production of ware to acquaint students with the essential principles.

483. Ceramic Decorating. Five credit hours. Spring Quarter. Ceramic Art, third year. Prerequisite, Fine Arts 482.

A laboratory course in designing and decorating clay wares by incising and relief treatment, slip painting and pate-sur-pate.

484. Ceramic Decorating. Five credit hours. Autumn Quarter. Ceramic Art, fourth year. Prerequisite, Fine Arts 483.

A laboratory course in color decoration by slips, vapors, salts, and glazes; on bisque, under-glaze and over-glaze; with hand and air brushes; by transfers and templates; with lusters, etching, etc., on clay and glass.

485. Ceramic Decorating. Five credit hours. Winter Quarter. Ceramic Art, fourth year. Prerequisite, Fine Arts 484.

A laboratory course in polychrome decorative designs applied by transfer from stone and steel, also architectural floor and wall polychrome designs.

486. Ceramic Ensemble Designing. Five credit hours. Spring Quarter. Ceramic Art, fourth year. Prerequisite, Fine Arts 485.

A laboratory course in the designing of shapes, and the decoration of sets of tiles and art wares for exterior panel decorations and interior furnishing.

500. Non-Professional Course in Landscape Architecture. Two credit hours. One Quarter. Autumn, Winter, Spring. Two lectures each week. Open to any student in the University not majoring in Landscape Architecture. No prerequisites. Miss Lazenby.

A general presentation of the elementary principles and practices of Landscape Architecture, with particular reference to the small place. Illustrated lectures, class discussions, reference reading and report writing.

This course is not open to students who have credit for Horticulture 500.

510. Theory of Landscape Design. Two credit hours. Winter Quarter. Two lectures each week. Landscape Architecture, second year. Prerequisites, five hours of freehand drawing and four hours of engineering drawing. Mr. Lynch.

An introductory study of the theories of design as applied to Landscape Architecture. Illustrated lectures, supplemented by reference readings, reports, and sketches.

This course is not open to students who have credit for Horticulture 515.

511. Elementary Landscape Design. Five credit hours. Autumn Quarter. Fifteen hours of laboratory work each week. Landscape Architecture, third year. Prerequisites, Fine Arts 407, Architecture 423, and Fine Arts 510. Mr. Lynch, Miss Lazenby.

Practical application of the theories of design to landscape compositions. Original problems in plan and perspective of vital parts of general problems. Laboratory work, supplemented by reading and research.

This course is not open to students who have credit for Horticulture 516.

512-513. Intermediate Landscape Design. Five credit hours. Winter and Spring Quarters. Fifteen hours of laboratory work each week. Landscape Architecture, third year. Prerequisite, Fine Arts 511. Mr. Lynch, Miss Lazenby.

A series of intermediate design problems in plan and perspective, with special emphasis on the planning of private properties used for residential purposes. The laboratory work is supplemented by research.

This course is not open to students who have credit for Horticulture 517-518.

514-515-516. Advanced Landscape Design. Five credit hours. Autumn, Winter, Spring Quarters. Fifteen hours of laboratory work each week. Landscape Architecture, fourth year. Prerequisite, Fine Arts 513. Mr. Lynch, Mr. Church.

An advanced course in design, involving more complex problems, such as large private estates, land subdivisions, parks and cemeteries.

This course is not open to students who have credit for Horticulture 519-520-521.

521-522. Plant Materials. Two credit hours. Autumn and Spring Quarters. One lecture and one laboratory period each week. Landscape Architecture, second year. Miss Lazenby.

A study of plants native to this and other sections of the United States. Par-

ticular emphasis given to the study of the habits and characteristics of woody plants with reference to their use in landscape compositions.

This course is not open to students who have credit for Horticulture 550-551.

523-524-525. Plant Materials. Two credit hours. Autumn, Winter, Spring Quarters. One lecture and one laboratory period each week. Landscape Architecture, third year. Miss Lazenby.

A study of plants native to this and other sections of the United States. Particular emphasis given to the study of the habits and characteristics of woody plants with reference to their use in landscape compositions.

Fine Arts 523 is not open to students who have credit for Horticulture 552.

530. History of Landscape Architecture. Three credit hours. Autumn Quarter. Three lectures each week. Landscape Architecture, third year. Prerequisites, Fine Arts 453 and Fine Arts 407, or the equivalent. Mr. Lynch.

A technical study of the historic examples of landscape design. Illustrated lectures, collateral reading, reports and sketches.

This course is not open to students who have credit for Horticulture 540.

FOR ADVANCED UNDERGRADUATES AND GRADUATES

According to the University regulations, courses in this group are not open to Freshmen and Sophomores.

655. History of Seventeenth Century Art. Five credit hours. Winter Quarter. Five lectures each week. Alternates with Fine Arts 656. Prerequisite, Fine Arts 453. Mr. Fanning.

The development of European art from the seventeenth to the nineteenth century. Illustrated lectures, reading, and reports.

***656. History of Oriental Art.** Five credit hours. Winter Quarter. Five lectures each week. Mr. Fanning.

The study of Asiatic culture expressed by the historical development of architecture, sculpture and painting in Persia, India, China, and Japan. Illustrated lectures, reading, and reports.

657-658-659. Proseminary. Five credit hours. Autumn, Winter, Spring Quarters. Ceramic Art, fourth year. Prerequisites, Fine Arts 451, 452, 453. Mr. Fanning.

Specialized study in important European Art periods. Ancient art subjects in Autumn; medieval in Winter; renaissance and modern in Spring. Lectures, round-table discussions, and presentation by each student of some special phase of research.

661-662-663. Advanced Technical Problems. Three to five credit hours. Autumn, Winter, Spring Quarters. Ceramic Art and Landscape Architecture, fourth year. Mr. Hopkins, Mr. Fanning, Mr. Frey, Mr. Church.

This course is open, by permission of the department, to students who have shown particular ability in design, drawing, painting, or sculpture and who wish to pursue advanced problems in these fields under the supervision of the department. Students in Landscape Architecture pursue special work in design and construction under these courses.

* Not given in 1928-1929.

FOR GRADUATES

An undergraduate student shall not be permitted to take any course in the "800" group except by permission of the Graduate Council.

801-802-803. Major Problems.

For description of graduate course in this department see the Bulletin of the Graduate School.

FRENCH

(See Romance Languages and Literatures)

GEOGRAPHY

Office, 213 Commerce Building

PROFESSORS HUNTINGTON, VAN CLEEF, PEATTIE, AND CARLSON, ASSISTANT PROFESSOR SMITH, AND DEPARTMENT ASSISTANTS

401. Principles of Geography. Five credit hours. One Quarter. Autumn, Winter, Spring. Five recitations each week. Mr. Carlson and assistants.

The geographic factors in environment: location, land, water, climate, plants, and animals; their relations to each other; and their importance as the physical basis of society.

This course is not open to students who have credit for Geography 402.

403. Economic Geography. Five credit hours. One Quarter. Autumn, Winter, Spring. Five recitations each week. Prerequisite, Geography 401. Mr. Van Cleef and assistants.

The fundamental industries, their chief products, and the influences of geographic environment thereon with special reference to North America.

411. Climatology. Four credit hours. Autumn Quarter. Three recitations and one two-hour laboratory period each week. Given biennially, alternating with Geography 421. Prerequisite, Geography 401. Mr. Peattie.

The controls of climate and a study of the climates of the world. Climatic cycles and their historical significance. The economic and social aspects of climate contrasts. Of especial interest to students in geography, economics, agriculture, and sociology.

421. Map Construction and Interpretation. Two credit hours. Spring Quarter. One recitation and one two-hour laboratory period each week. Given biennially, alternating with Geography 411. Prerequisite, Junior standing or permission of the instructor. Mr. Carlson.

The principles of map-making; the merits of the more important map projections; the requisites of maps for various purposes; how to judge a map. The interpretation and representation of geographic data. The importance of maps as a means of presenting graphically social relationships and industrial and commercial facts.

422. Historical Geography and Commerce of the United States. Three credit hours. One Quarter. Autumn and Spring. Three recitations each week. Prerequisite, Geography 402 or 403. Mr. Huntington.

Geographic influences in the history of the United States. Location, topography, climate, and natural resources as factors in the distribution of population, the selection

of occupations and the location of industries and trade routes. The development of the internal commerce of the United States, and the basis of her foreign trade.

This course is not open to students who have credit for Geography 601.

FOR ADVANCED UNDERGRADUATES AND GRADUATES

According to the University regulations, courses in this group are not open to Freshmen and Sophomores.

603. The Localization of Manufacturing Industries of the United States. Four credit hours. Spring Quarter. Four recitations each week. Prerequisite, Economics 401-402. Mr. Carlson.

Geographic influences on American manufacturing. The distribution of the industry in the United States. The relation of land and population to the growth and variety of manufacturers. Factors affecting the localization of particular industries. The development of centers of general industry. Industrial districts. Classification and analysis of the manufacturing business of the United States as a whole, and special study of representative industries, as to labor, supply, sources, quantity, and value of material and power used, transportation facilities available, quantity and value of products, and problems of competition and markets. A term report will be required of each student.

604. Conservation of Natural Resources. Two credit hours. Autumn Quarter. Two recitations each week. Prerequisites, Geography 401 and Economics 401-402. Mr. Huntington.

The importance of the fundamental natural resources: agricultural, forest, mineral, and water. The exploitation of soils, forest, mines, etc., and the movement for their conservation. The reclamation of arid and swamp land, reduction of erosion, development of forestry, elimination of waste in mining, improvement of waterways, use of water power, and problems of water supply.

605. Economic and Social Geography of Ohio. Two credit hours. Winter Quarter. Two recitations each week. Prerequisites, Geography 403 and Economics 402 or Sociology 402. Mr. Huntington.

Geographic influences in the history of the state. A study of its agriculture, industries, and social conditions, together with the underlying physical, climatic, and other environmental factors that have contributed to the present development of the region.

606. Land Utilization. Two credit hours. Spring Quarter. Prerequisites, Geography 403 and Economics 402. Mr. Huntington.

Land as a natural resource. Its importance and classification. A discussion of agricultural, forest, mineral, and urban lands. Character and location as factors in utilization and value. The relation of classification to land policies and conservation policies. City planning, zoning, and suburban development.

621. Economic and Social Geography of Europe. Three credit hours. Autumn Quarter. Three recitations each week. Prerequisites, Geography 402 or 403 and Economics 402 or Sociology 402. Mr. Van Cleef.

A study of the human geography of Europe. The racial geography of the continent and the influences of geographic environment in the economic, social, and political progress of the various nations.

623. The Political Geography of South America. Three credit hours. Autumn Quarter. Three recitations each week. Prerequisite, Geography 403. Mr. Carlson.

A study of South America by countries. Location, topography, climate, and natural resources, influencing economic, social, and political development. The commercial relations of South America, with particular reference to the United States.

624. The Caribbean Region and the Panama Canal. Three credit hours. Winter Quarter. Three recitations each week. Prerequisite, Geography 403. Mr. Carlson.

The geography of the regions between the United States and South America. Their resources, industries, and products. The economic and social development of their people and the nature and relations of their trade, particularly with the United States. The commercial and strategic importance of the Panama Canal to both the Americas.

625. The Economic Geography of the Far East. Three credit hours. Spring Quarter. Three recitations each week. Prerequisite, Geography 403. Mr. Peattie.

The geographical aspects of the economic and political problems of the Pacific Ocean. The ratio of land to population in the islands and lands adjacent to this ocean and the resultant economic, social, and political consequences. Their undeveloped resources and the opportunity for the investment of American capital. The present and prospective commercial relations of the United States with Asia and Australasia.

631. The Geography and History of Commerce. Three credit hours. Spring Quarter. Three recitations each week. Prerequisite, Geography 401 or 402. Mr. Peattie.

A study of the basis and development of commerce from the earliest times to the present. The successive leadership among the nations and the contributing factors. Geographic influences in present-day national commercial policies and in modern business.

632. World Industries and Commerce. Three credit hours. Autumn Quarter. Three recitations each week. Prerequisite, Geography 403, or Geology 401, or Geology 430. Mr. Carlson.

A survey of the world's important agricultural and manufacturing industries and the geographic factors influencing their location and development.

The exchange of commodities; the direction of movement; and the balance of trade. The relation of trade balances to industrial development. The possible world's markets for the American merchant.

634. Trade Centers and Trade Routes. Three credit hours. One Quarter. Winter and Spring. Three recitations each week. Prerequisites, Geography 403 and Economics 402. Mr. Van Cleef.

The world's principal ports, inland trade centers, and trade routes are considered in the light of both domestic and foreign trade development. A study of geographic factors in the establishment and growth of trade centers. The reciprocal relations in the development of the hinterland and trade centers.

The world's great trade routes, including land as well as water routes and their effect upon the shifting of trade centers. The significance of inland waterways in trade. The influence of the automobile, airplane, and airship upon routes. The work of a port. Planning for its future.

The part played by postal, telegraph, cable, wireless, and radio communication in the world's trade. Coaling stations, their location, strategic and economic importance.

641. Field Work in Geography and Commerce. One to three credit hours. One Quarter. Autumn and Spring. Assigned readings, conferences, and reports. Prerequisites, eighteen hours of geography, Senior standing, and consent of the instructor. Graduate students should take "800" courses. Not more than six hours credit to be derived from Geography 641 and 642. But three hours credit from these courses will be given in a single Quarter. Mr. Huntington, Mr. Van Cleef, Mr. Peattie, Mr. Carlson.

Special investigations in the field of applied geography. Each student will be required to write up the results of his work in the form of maps, diagrams, and a final typewritten report.

642. Special Problems in Geography and Commerce. Three credit hours. One Quarter. Autumn, Winter, Spring. Assigned readings, conferences, and reports. Prerequisites, eighteen hours of geography, Senior standing, and consent of instructor. Graduate students should take "800" courses. Not more than six hours credit may be derived from Geography 641 and 642. But three hours credit from these courses will be given in a single Quarter.

(a) Problems in Physiographic Geography. Mr. Peattie, Mr. Carlson.

(b) Problems in Climatology. Mr. Van Cleef, Mr. Peattie.

(c) Problems in Political and Historical Geography. Mr. Huntington, Mr. Peattie.

(d) Problems in Economic and Commercial Geography. Mr. Huntington, Mr. Van Cleef, Mr. Carlson.

661. Geographic Factors in Civilization. Three credit hours. Winter Quarter. Three recitations each week. Prerequisites, sixteen hours of geography or Geography 401 and advanced standing in history or sociology. Mr. Peattie.

A study of the principles of historical geography. The story of geographic influences in social and cultural developments. Designed for advanced students of geography, history, and sociology.

FOR GRADUATES

An undergraduate student shall not be permitted to take any course in the "800" group except by permission of the Graduate Council.

801-802-803. Research in Geography and Commerce.

805-806-807. Seminary in Geography and Commerce.

808-809-810. Research in the Geography of Conservation and Land Utilization.

811. History of Geography.

815-816-817. Problems in the Geography of Foreign Commerce.

821-822-823. Problems in Industrial and Agricultural Geography.

831-832-833. Research in Physical Geography.

For description of graduate courses in this department see the Bulletin of the Graduate School.

GEOLOGY

Office, 103 Orton Hall

PROFESSORS BOWNOCKER AND CARMAN, ASSISTANT PROFESSOR SPIEKER,
MR. STOCKDALE, MISS STEWART, MR. GLOCK, MR. BECK-
WITH, MR. THOMAS, MR. STOUT

SEQUENCE OF COURSES AND UNDERLYING SCIENCES. Students who desire to major in geology should start with General Geology 401 and 402.

Underlying sciences are: chemistry, physics, mineralogy, zoology, and botany. Chemistry, especially, should be taken as early in the course as possible. Engineering drawing also is desirable.

401. General Geology. Five credit hours. One Quarter. Autumn, Winter, Spring. Four recitations and one two-hour laboratory period each week. Saturday mornings (except in the Winter Quarter) must be

kept open for field trips. With 402, this constitutes the first course in geology. All instructors.

A study of the surface features of the earth and how they were produced; an elementary study of minerals and rocks, and of topographic maps.

402. General Geology. Five credit hours. One Quarter. Autumn, Winter, Spring. Four recitations and one two-hour laboratory period each week. Saturday mornings (except in the Winter Quarter) must be kept open for field trips. Prerequisite, Geology 401. All instructors.

A study of structural features and geological history of the earth; of representative fossils, and of topographic and geologic maps.

404. Glacial Geology. Five credit hours. Spring Quarter. Four recitations and one two-hour laboratory period each week. Saturdays must be kept open for field trips. Prerequisite, Geology 401-402. Mr. Glock.

A study of the glacial geology of North America. The first half of the Quarter will be given to lectures, assigned readings, and map work; the second half largely to field work and the preparation of reports.

406. Structural and Dynamical Geology. Five credit hours. Winter Quarter. Four recitations and one two-hour laboratory period each week. Prerequisites, Geology 401-402 or Senior rank and Geology 415. Mr. Spieker.

A detailed study of the structural features of the earth's crust and of the forces which have produced these structures. This course includes much practice in the interpretation of geological maps.

407. Historical Geology. Five credit hours. Spring Quarter. Four recitations and one two-hour laboratory period each week. Saturdays must be kept open for field trips. Prerequisites, Geology 401-402 and 406, or Senior rank and Geology 406. Mr. Carman.

A study of the geological history of North America to the close of the Paleozoic, its physical history, and life development. The course deals with the classification and distribution of the geological formations, especially those of Ohio, and with the characteristic fossils of each system.

415. Physiography. Five credit hours. Autumn Quarter. Four recitations and one two-hour laboratory period each week. Prerequisite, Geology 401-402, or Senior rank. Mr. Glock.

A consideration of the origin, development, and interpretation of surface features and type physiographic forms.

420. Meteorology. Five credit hours. Spring Quarter. Four recitations and one two-hour laboratory period each week. No prerequisite. Mr. Stockdale.

A study of the elements of weather and weather forecasting. Special attention is given to Ohio.

FOR ADVANCED UNDERGRADUATES AND GRADUATES

According to the University regulations, courses in this group are not open to Freshmen and Sophomores.

608. Stratigraphic Geology of Ohio. Five credit hours. Autumn Quarter. Prerequisite, four Quarters of geology. Students intending to elect this course should consult the instructor before registering. Mr. Carman.

Field trips, lectures, and assigned readings. Field trips on Saturdays (entire day) while the weather permits.

The geological formations of central Ohio are studied in the field and those

formations more distant from Columbus are studied by rock specimens and assigned readings. This course is intended to acquaint the student with methods of field investigation.

This course is not open to students who have credit for Geology 405.

610. Physiography of the United States. Five credit hours. Winter Quarter. Four recitations and one two-hour laboratory period each week. Alternates with Geology 609. Prerequisites, four Quarters of geology, or of geology and geography, including Geology 415. Mr. Glock.

A study of the physiographic regions of the United States. The topographic form and physiographic history with the geologic history as a background. Designed to give the student of geology or geography a working knowledge of the physiography of the United States.

612. Special Problems. Three to five credit hours. All Quarters. Assigned readings, conferences, and reports. Prerequisites, four Quarters in geology and consent of the head of the department.

A study of special topics, conferences, and reports.

620. Introductory Paleontology. Three credit hours. Autumn Quarter. Two recitations and one two-hour laboratory period each week. Prerequisites, four Quarters of geology or of geology and zoology. Mr. Carman, Miss Stewart.

A study of the systematic classification of the animal kingdom as a means of becoming acquainted with the faunas that characterize the various geological formations. The course deals mainly with the generic and specific characters of the fossil invertebrates and their use in identifying and correlating geological formations.

This course is not open to students who have credit for Geology 408.

621. Introductory Paleontology. Three credit hours. Winter Quarter. Mr. Carman, Miss Stewart.

A continuation of Geology 620.

This course is not open to students who have credit for Geology 409.

622. Introductory Paleontology. Three credit hours. Spring Quarter. Mr. Carman, Miss Stewart.

A continuation of Geology 621.

This course is not open to students who have credit for Geology 410.

FOR GRADUATES

An undergraduate student shall not be permitted to take any course in the "800" group except by permission of the Graduate Council.

801. Advanced Historical Geology.

802. Advanced Historical Geology.

803. Advanced Historical Geology.

804. Research Work.

805. Research Work.

806. Research Work.

For description of graduate courses in this department see the Bulletin of the Graduate School.

GERMAN

Offices, 2, 3, 4 Page Hall

PROFESSORS M. B. EVANS, EISENLOHR, KURATH AND BOEHME, ASSISTANT PROFESSOR THOMAS, MR. ROESELER

401. Elementary German. Five credit hours. One Quarter. Autumn, Winter, Spring. Five recitations each week. All instructors.

The elements of German grammar; reading of easy prose; oral practice.

402. Elementary German. Five credit hours. One Quarter. Autumn, Winter, Spring. Five recitations each week. Prerequisite, German 401 or equivalent. All instructors.

The elements of German grammar; reading of easy prose; oral practice.

403. Intermediate German. Five credit hours. One Quarter. Autumn, Winter, Spring. Five recitations each week. Prerequisite, German 402 or equivalent. All instructors.

Reading of narrative prose; grammar review; oral and written practice.

404. Easy Classical Reading. Five credit hours. One Quarter. Autumn, Winter, Spring. Five recitations each week. Prerequisite, German 403 or equivalent. Mr. Kurath, Mr. Böhme, Miss Thomas, Mr. Röseler.

Reading of (a) a classical drama supplemented by discussions and lectures on the structure of the drama, its characters, and its historical background, (b) other literature of the classical period or of the nineteenth century. Practice in speaking and writing German.

406. Science Reading. Five credit hours. One Quarter. Autumn and Spring. Five recitations each week. Prerequisite, German 403 or equivalent. Mr. Eisenlohr, Mr. Röseler.

Rapid reading of technical literature. This is preceded or accompanied by practice in word formation, word compounds, sentence structure. The object of the course is to give the student a reading knowledge of technical German.

Advanced German. Five credit hours a Quarter, or by permission of the department, three credit hours a Quarter. Autumn, Winter, Spring Quarters. Five (or three) recitations each week. Prerequisite, German 404 or 406 or equivalent. No student may take more than three courses in this group. All instructors.

A group of reading and practice courses. Three hours a week devoted to selected readings from eighteenth and nineteenth century authors. Two hours a week devoted to practice in speaking and writing German. One course in this group is offered each Quarter, the reading selections varying from year to year.

411. Autumn Quarter, 1928. Goethe: Hermann und Dorothea; Iphigenie; Vicar of Sesenheim. Mr. Eisenlohr.

422. Winter Quarter, 1929. Schiller: Kabale und Liebe; Don Carlos; Braut von Messina. Miss Thomas.

442. Spring Quarter, 1929. Modern Drama: Käthchen von Heilbronn; Agnes Bernauer; Der Arme Heinrich. Mr. Böhme.

476-477-478. Readings in Technical and Critical German Literature. Three credit hours. Autumn, Winter, Spring Quarters. Prerequisite: for undergraduates, one course in the group "Advanced German," and written recommendation from the department in which the student's

major study lies; for graduates, written recommendation from the department in which lies the student's field of specialization.

This is an advanced reading course primarily to afford graduate students an opportunity of reading the most important technical and critical material of their particular fields published in German, under the guidance of the German Department. Individual reading assignments will be selected by the department in charge of the major study in cooperation with the German Department. The course will be divided into three groups, one of which will be given each Quarter.

476. Autumn Quarter, 1928. Readings in Education. Mr. Röseler.

477. Winter Quarter, 1929. Readings in Science. Mr. Eisenlohr.

478. Spring Quarter, 1929. Readings in Literature and the Social Sciences. Mr. Evans.

FOR ADVANCED UNDERGRADUATES AND GRADUATES

According to the University regulations, courses in this group are not open to Freshmen and Sophomores.

Proseminary: Eighteenth and Nineteenth Century Literature. Three credit hours. Autumn, Winter, Spring Quarters. Three hours lecture and quiz each week. Prerequisite, six Quarters of German or equivalent. All instructors.

This group of courses is intended to serve as an introduction to a more intensive study of German literature. There will be informal lectures in German and English, discussions and reports. The list of authors to be studied will vary from year to year.

611. Autumn Quarter, 1928. Goethe: Lyrics. Mr. Böhme.

632. Winter Quarter, 1929. Friedrich Hebbel: Life and Works. Mr. Evans.

612. Spring Quarter, 1929. Goethe: Faust. Mr. Evans.

655. Phonetics. Three credit hours. Autumn Quarter. Three hours lecture and quiz each week. No prerequisites. Mr. Kurath.
Speech sounds with special reference to German, French, and English.

675. The German Language. Three credit hours. Winter Quarter. Three hours lecture and quiz each week. Prerequisite, six Quarters of German or equivalent. Mr. Kurath.

The study of texts illustrating the history of the German language.

685. Advanced Composition. Three credit hours. Spring Quarter. Three hours lecture and quiz each week. Prerequisite, six Quarters of German or equivalent. Mr. Eisenlohr.

An advanced course in speaking and writing German, accompanied by a review of German syntax.

695. Minor Investigations. Three credit hours. Autumn, Winter, Spring Quarters. Open only on permission of the department. All instructors.

Investigations of minor problems in the various fields of German literature and philology.

NOTE: TEACHING COURSES. For the Teaching Course in this department see the Department of Principles of Education, Course 725.

FOR GRADUATES

An undergraduate student shall not be permitted to take any course in the "800" group except by permission of the Graduate Council.

*801. Advanced Middle High German.

*805. Gothic.

*810. Old High German.

855-856-857. Seminary in German Literature.

For description of graduate courses in this department see the Bulletin of the Graduate School.

GREEK LANGUAGE AND LITERATURE

(See Classical Languages and Literature)

HISTORY

Offices, 207, 204, 211 and 304 University Hall

PROFESSORS WITKE, KNIGHT, SIEBERT (RESEARCH), McNEAL, HOCKETT, COLE, AND WASHBURNE, ASSISTANT PROFESSORS HILL, NOYES, LARSEN, AND CLYDE, MR. ROSEBOOM, MR. WEISENBURGER, MR. BRITE, MR. LEWINSON, MR. NEWMAN, AND DEPARTMENT ASSISTANTS

For sequence of courses in history for students in the College of Education majoring in history, see page 60.

401. Modern European History to 1789. Five credit hours. One Quarter. Autumn, Winter, Spring. Five class meetings each week. All instructors.

A general account of the history of western Europe from 1500 to the French Revolution, with a preliminary survey of the late Middle Age. This course, with 402, is the introductory work in history, and is advised for all who expect to major in the department. Textbook, collateral readings, and discussions. One section of this course, with an enrollment limited to two hundred and fifty students, will be conducted, in the Autumn Quarter, by means of general lectures three times a week with small quiz sections on the other two days. See the Time Schedule for hours of lectures and quiz sections.

This course is not open to students who have credit for European History 401.

402. Modern Europe since 1789. Five credit hours. One Quarter. Autumn, Winter, Spring. Five class meetings each week. Prerequisite, History 401. All instructors.

This course is a continuation of History 401, and is conducted by the same methods. One lecture session, limited to two hundred and fifty students, will be provided in the Winter and Spring Quarters. See Time Schedule.

This course is not open to students who have credit for European History 402.

403. History of the United States (1763-1850). Five credit hours. One Quarter. Autumn, Winter, Spring. Five class meetings each week. Open only to Freshmen in the Colleges of Education, and Commerce and Administration. This course, or 405, must precede all other courses in American history, except History 434 and 435. All instructors.

* Not given in 1928-1929.

A study of the general political, constitutional and economic development of the United States from the beginning of the Revolutionary era to the end of the Jacksonian epoch. Textbook, collateral readings, and discussions.

This course is not open to students who have credit for American History 401 or 403.

404. History of the United States (1850-1925). Five credit hours. One Quarter. Autumn, Winter, Spring. Five class meetings each week. Prerequisite, History 403. Open only to Freshmen in the Colleges of Education, and Commerce and Administration. Prerequisites, American History 401 or 403, or History 403. This course, or History 405 and 406, must precede all other courses in American history, except History 434 and 435. All instructors.

A continuation of History 403.

This course is not open to students who have credit for American History 402 or 404.

405. General Survey of United States History (1763-1850). Five credit hours. One Quarter. Autumn, Winter, Spring. No prerequisites. Not open to Freshmen. All instructors.

A study of the general political, constitutional and economic development of the United States from the beginning of the Revolutionary era to the end of the Jacksonian epoch. Textbook, collateral readings, and discussions.

This course is not open to students who have credit for American History 401 or 403.

406. History of the United States (1850-1925). Five credit hours. One Quarter. Autumn, Winter, Spring. Five class meetings each week. Prerequisite, History 405. Not open to Freshmen. All instructors.

A continuation of History 405

This course is not open to students who have credit for American History 402 or 404.

***411. Ancient History, Prehistoric and Oriental.** Three credit hours. Autumn Quarter. Three class meetings each week. Not open to Freshmen. Mr. Larsen.

A course designed for those intending to teach ancient history in secondary schools. Together with the course in Greek and Roman history it furnishes a survey of the ancient field. Lectures, readings, and discussions.

412. Greek History. Five credit hours. Autumn Quarter. Five class meetings each week. Not open to Freshmen. Mr. Larsen.

A course designed for students of the ancient classics and for those intending to teach history in the secondary schools. Lectures, readings, and discussions.

This course is not open to students who have credit for European History 405.

413. Roman History. Five credit hours. Winter Quarter. Five class meetings each week. Not open to Freshmen. Mr. Larsen.

A course designed for students of the ancient classics and for those intending to teach history in the secondary schools. Lectures, readings, and discussions.

This course is not open to students who have credit for European History 406.

* Not given in 1928-1929.

414. Europe in the Middle Age, to 1100 A. D. Three credit hours. Autumn Quarter. Three class meetings each week. Not open to Freshmen. Mr. McNeal.

A general course in the history of Europe from the collapse of the Roman Empire to the Crusades. Lectures, readings, and discussions.

415. Europe in the Middle Age, from 1100 A. D. Three credit hours. Winter Quarter. Three class meetings each week. Not open to Freshmen. Prerequisite, History 414. Mr. McNeal.

416. History of the Christian Church to the Protestant Reformation. Five credit hours. Spring Quarter. Five class meetings each week. Prerequisites, two Quarters of European history. Mr. Siebert.

This course traces the development of the Christian Church from its origin to the Protestant Reformation, emphasizing the early influence of Judaism and Greek culture, the development of Catholicism, heresies, monasticism, and the rise of the papacy, together with early movements for reform. Lectures, readings, and discussions.

421. England to 1603. Five credit hours. Autumn Quarter. Five class meetings each week. Not open to Freshmen. Mr. Noyes.

A study of English social and political development during the Middle Age. With History 422, it constitutes an introduction to English history for those students who wish a general survey of the subject, and for those who desire a background for the study of English literature. Lectures, readings, and discussions.

This course is not open to students who have credit for European History 403.

422. England since 1603. Five credit hours. Winter Quarter. Five class meetings each week. Not open to Freshmen. Mr. Noyes.

An introductory course in English history during the Modern Period. The course is a continuation of History 421, but may be taken independently. Lectures, readings, and discussions.

This course is not open to students who have credit for European History 404.

423. Europe from 1815 to 1878. Five credit hours. Autumn Quarter. Five class meetings each week. Prerequisites, History 401-402, or 403-404, or 405-406. Mr. Washburne.

A study of the rise of the democratic idea and the principle of nationalism, together with the economic and social development during this period. The changes in international relations in central and western Europe are traced to the Congress of Berlin. Lectures, readings, and discussions.

This course is not open to students who have credit for European History 407.

424. Europe from 1878 to 1919. Five credit hours. Winter Quarter. Five class meetings each week. Prerequisites, same as for History 423. Mr. Washburne.

A study of the European system following the decisions of the Congress of Berlin, with special emphasis on international affairs. The causes of the conflict of 1914, the main events of the World War and the armistice terms, preparatory to the Peace Conference, will be discussed. Lectures, readings, and discussions.

This course is not open to students who have credit for European History 408.

425. History of Modern Russia. Three credit hours. Spring Quarter. Three class meetings each week. Prerequisite, History 401 or 402, or European History 401-402. Mr. Clyde.

An introductory course designed to acquaint the student with the major developments in the modern history of Russia. The early period down to the Seventeenth Century will only be touched upon in broad outline. Emphasis will be laid on the period since Peter the Great, with special reference to Russian expansion and imperialism, the World War, and the subsequent revolutions. Lectures, readings, and discussions.

This course is not open to students who have credit for European History 410.

***426. The Far East.** Three credit hours. Autumn Quarter. Three class meetings each week. Not open to Freshmen. Mr. Clyde.

This is an introductory course designed to acquaint the student with major developments in the modern history of China and Japan, and with the contacts between these nations and the western world, with special reference to the events of the nineteenth and twentieth centuries. Lectures, readings, and discussions.

This course is not open to students who have credit for European History 616.

427. The History of Japan. Five credit hours. Autumn Quarter. Five class meetings each week. Lectures and discussion. Not open to Freshmen. Mr. Clyde.

This course aims to present an introductory survey of the domestic history of Japan. The development of institutional life, social, religious and political will be stressed, while foreign relations will be touched upon only so far as is necessary to an understanding of domestic growth. The latter part of the course is concerned mainly with constitutional development.

431. Political Parties in the United States. Five credit hours. Autumn Quarter. Five class meetings each week. Prerequisites, American History 401-402, or 403-404; or History 403-404, or 405-406. Mr. Cole, Mr. Hill.

The radical party of the Revolution; the origin and growth of national parties; the slavery issue in party politics; the effect of the Civil War upon parties; party development in recent American history, special attention being devoted to the influence of the new economic and social conditions in creating new parties and policies. Lectures, readings, discussions, and reports.

This course is not open to students who have credit for American History 405.

432. Leading Characters in American History. Five credit hours. Winter Quarter. Prerequisites, American History 401-402, or 403-404; or History 403-404, or 405-406. Mr. Cole.

A study of the lives of a number of statesmen, educators, men of affairs, clergymen, and others; with special reference to the significance of their contributions to American life. Lectures, readings, discussions, and reports.

This course is not open to students who have credit for American History 414.

433. The Struggle for North America. Five credit hours. Spring Quarter. Five class meetings each week. Prerequisites, two Quarters of history. Mr. Roseboom.

The history of the transplanting of European culture and institutions to America. A comparative study of the colonizing methods of the Spanish, French, English, Dutch, Swedes, and Russians. The expansion of the colonies and the resulting international struggle for supremacy. Textbook, lectures, collateral readings, reports, and discussions.

This course is not open to students who have credit for American History 413.

* Not given in 1928-1929.

434. Colonial Period of Latin America. Five credit hours. Autumn Quarter. Five class meetings each week. No prerequisite. Not open to Freshmen. Mr. Hill.

The European background, Spanish and Portuguese colonization in North, Central and South America, with special attention to the founding of the colonies, their forms of government and relations to the home countries, and the development of a Latin-American life. Lectures, discussions, readings, and reports.

This course is not open to students who have credit for American History 408.

435. History of the Latin-American Republics. Five credit hours. Winter Quarter. Five class meetings each week. No prerequisite. History 434 affords a good foundation. Not open to Freshmen. Mr. Hill.

The development of revolutionary sentiment, the wars for independence, the establishment and political development of the Latin-American Republics, the relations of these republics with each other and with the outside world. Lectures, readings, discussions, and reports.

This course is not open to students who have credit for American History 409.

436. History of Canada. Five credit hours. Spring Quarter. Five class meetings each week. Not open to Freshmen. Mr. Wittke.

A general survey of Canadian history from the earliest times to the present. Special attention is given to the relations of Canada with the United States and with the mother country, and to a comparison of Canadian institutions and problems with our own. Lectures, readings, and discussions.

This course is not open to students who have credit for American History 411.

437. The History of Ohio. Three credit hours. Autumn Quarter. Three class meetings each week. Prerequisites, American History 401-402, or 403-404; or History 403-404, or 405-406. Mr. Roseboom.

A general survey of the history of Ohio, from its settlement and early developments to the present time, with more intensive study of the period since 1850. Lectures, readings, and discussions.

This course is not open to students who have credit for American History 412.

FOR ADVANCED UNDERGRADUATES AND GRADUATES

For all courses in this group, the prerequisite is at least Junior standing and four Quarters in the social science field, of which at least two must be in history. Specific prerequisites are indicated in connection with each course.

According to the University regulations, courses in this group are not open to Freshmen and Sophomores.

601. Introduction to Historical Research. Three credit hours. Autumn Quarter. Three class meetings each week. Prerequisites, four Quarters of history and Senior standing. Required of candidates for the Master's degree. Mr. McNeal, Mr. Cole, Mr. Hockett.

Instruction in the use of standard guides and indexes, followed by a study of the principal kinds of original sources and exercises in historical criticism and composition. During most of the Quarter, the class will be divided into two sections, one dealing with problems in the European field, the other with problems in the American field, according to the major interest of the student.

This course is not open to students who have credit for American History 601 or European History 646.

602. Hellenic Civilization. Three credit hours. Autumn Quarter. Three class meetings each week. Prerequisites, four Quarters of European history. Mr. Larsen.

This course is primarily intended for advanced history students who have not taken more detailed courses in Greek history. It aims to introduce them to some of the chief phases and contributions of Greek culture and to the literature on the subject. Lectures, readings, reports and discussions.

This course is not open to students who have credit for European History 606.

603. Roman Civilization. Three credit hours. One Quarter. Three class meetings each week. Prerequisites, four Quarters of European history. Mr. Larsen.

This course is similar to History 602. It is intended primarily for advanced history students who have not taken more detailed courses in Roman history. It aims to introduce them to some of the chief phases and contributions of Roman culture and to the literature on the subject. History 602 and 603 combined give a brief account of the place of the Graeco-Roman civilization in world history. Lectures, readings, reports and discussions.

This course is not open to students who have credit for European History 607.

604. French Civilization in the Middle Age. Three credit hours. Spring Quarter. Three class meetings each week. Prerequisite, History 414 and 415, or Senior standing with a major in History. Advanced students from other departments admitted with the consent of the instructor. Mr. McNeal.

France at the height of the Middle Age; the growth of the French monarchy, feudal and manorial institutions, the rise of towns, art and learning. Lectures, readings, and discussions.

This course is not open to students who have credit for European History 621.

***605. Germany and Italy in the Middle Age.** Three credit hours. Winter Quarter. Three class meetings each week. Prerequisite, same as for History 604. Mr. McNeal.

Lectures, readings, and discussions.

This course is not open to students who have credit for European History 622.

607. The Age of the Renaissance (1250-1527). Three credit hours. Autumn Quarter. Three class meetings each week. Prerequisites, European History 401-402, or History 401-402; and two other Quarters of history, or the history of education, or Fine Arts 452 and 453. Mr. Siebert.

This course deals with the rise of our modern civilization, the revolutionary change from the limited religious interest of the Middle Age through the revival of letters to the wide variety of interests in the outward world, manifested in the new painting, architecture, education, printing, science, geographical discoveries, etc. Lectures, collateral readings, and discussions.

This course is not open to students who have credit for European History 608.

608. The Period of the Reformation. Three credit hours. Winter Quarter. Three class meetings each week. Prerequisites, European History 401-402, or History 401-402; and two other Quarters of history,

* Not given in 1928-1929.

which may include historical courses in education or fine arts. Mr. Siebert.

This course deals with the religious reformational movements from the death of Dante (1321) to the end of the Council of Trent (1563), including the movements led by Wyclif, Huss, Luther, Calvin, and Zwingli, and the Counter Reformation within the Roman Catholic Church. Lectures, collateral readings, and discussions.

This course is not open to students who have credit for European History 609.

***609. The Roman Empire, the Period of the Principate.** Three credit hours. Autumn Quarter. Three class meetings each week. Prerequisite, History 413, or Senior standing with a major in History. Advanced students from other departments admitted with the consent of the instructor. Mr. Larsen.

A study of the development of the Roman government during the transition from the Republic to the Empire and of the history and institutions of the Empire from Augustus to the period of confusion in the third century. Lectures, readings, reports, and discussions.

***610. The Late Roman Empire.** Three credit hours. Winter Quarter. Three class meetings each week. Prerequisite, same as for History 609. Mr. Larsen.

A study of the history and institutions of the Empire from Diocletian to Justinian. Lectures, readings, reports, and discussions. This course is the natural continuation of History 609.

611. Constitutional History of England to 1485. Three credit hours. Autumn Quarter. Three class meetings each week. Prerequisite, History 421, or Senior standing with a major in History. Open to Arts-Law students and to advanced students in other departments without these prerequisites, upon the consent of the instructor. Mr. Siebert.

Designed for students who are interested in the origin and development of popular government, for those taking the Arts-Law course or expecting to enter the College of Law, and for graduates. Textbook, lectures, collateral readings, and discussions.

This course is not open to students who have credit for European History 604.

612. Constitutional History of England since 1485. Three credit hours. Winter Quarter. Three class meetings each week. Prerequisite, History 422, and same as for History 611. Mr. Siebert.

A continuation of History 611. Special emphasis will be given to the evolution of parliamentary government, constitutional liberties, the growth of the cabinet and party system, Catholic emancipation, electoral reform, the Irish question, and the rise of democracy. Textbook, lectures, collateral readings, and discussions.

This course is not open to students who have credit for European History 605.

***613. England in the Tudor Period.** Three credit hours. Winter Quarter. Three class meetings each week. Prerequisite, History 421, or History 401-402, or Senior standing with a major in History. Advanced students in other departments admitted with the consent of the instructor. Mr. Noyes.

An intensive study of England in the period of transition, emphasizing social and political conditions, together with a brief survey of contemporary Europe. Some atten-

* Not given in 1928-1929.

tion will be given to the source material of the period. Lectures, readings, reports, and discussions.

This course is not open to students who have credit for European History 625.

*614. England in the Stuart Period. Three credit hours. Spring Quarter. Three class meetings each week. Prerequisite, History 421, or History 401-402, or Senior standing with a major in History. Advanced students from other departments admitted with the consent of the instructor. Mr. Noyes.

An intensive study of England in the seventeenth century including the social, religious and political causes of the Civil Wars, and the struggle between King and Parliament, a consideration of the Commonwealth, the Restoration and the Glorious Revolution of 1688, and the relations of this period with the settlement of North America. The work will be based to a considerable extent upon the sources for the period. Lectures, readings, reports, and discussions.

This course is not open to students who have credit for European History 626.

615. England from the Reform Bill of 1832 to 1867. Three credit hours. Winter Quarter. Three class meetings each week. Prerequisite, same as for History 614. Mr. Noyes.

This course, with History 616, aims to survey the field of English history from 1832 to the present time. In addition to political history and international relations, social and economic factors will receive special emphasis, including the effects of the Industrial Revolution, the humanitarian movement, the various reform measures, and the intellectual attainments of the Victorian age. Lectures, readings, and discussions.

This course is not open to students who have credit for European History 627.

616. England since 1867. Three credit hours. Spring Quarter. Three class meetings each week. Prerequisite, same as for History 615. Mr. Noyes.

A survey of recent and contemporary English history, with emphasis upon the social, political and international developments of the late Victorian and post-Victorian periods, including the movement for democracy, together with a consideration of England's part in the World War and reconstruction, and contemporary problems. Lectures, readings, and discussions.

This course is not open to students who have credit for European History 628.

621. Expansion of Europe to 1588. Three credit hours. Autumn Quarter. Three class meetings each week. Prerequisite, History 401-402, or Senior standing with a major in History. Advanced students from other departments admitted with the consent of the instructor. Mr. Washburne.

A discussion of the early contact of Europe with other countries; the period of discovery and colonization, the Portuguese empire in the East and the Spanish monopoly in the West. The survey extends to the collapse of the Iberian control of expansion by the destruction of the Armada. Lectures, readings, and discussions.

This course is not open to students who have credit for European History 601.

* Not given in 1928-1929.

622. Expansion of Europe to 1815. Three credit hours. Winter Quarter. Three class meetings each week. Prerequisite, same as for History 621. Mr. Washburne.

A study of the rise of the chartered trade companies; the ascendancy of the Dutch; the contest between the Dutch and the English for commercial supremacy and the long struggle between the English and the French for commercial and maritime supremacy, with its resultant effects upon India and North America. The survey extends through the settlement at the end of the Napoleonic era. Lectures, readings, and discussions.

This course is not open to students who have credit for European History 602.

623. Expansion of Europe from 1815 to the Present. Three credit hours. Spring Quarter. Three class meetings each week. Prerequisite, same as for History 621. Mr. Washburne.

A discussion of the problems of expansion in the nineteenth and twentieth centuries; the partition of Africa, the development of India, the movement into the Southern Pacific, European interests in the Far East, modern imperialism after 1876 and its relation to the World War, with the resultant readjustment of territory. Lectures, readings, and discussions.

This course is not open to students who have credit for European History 603.

624. The French Revolution and Napoleon. Three credit hours. Winter Quarter. Three class meetings each week. Prerequisite, History 401-402, or Senior standing with a major in History. Advanced students from other departments admitted with the consent of the instructor. Mr. McNeal.

This course is not open to students who have credit for European History 631.

*625. The Third French Republic. Three credit hours. Autumn Quarter. Three class meetings each week. Prerequisites, same as for History 624. Mr. McNeal.

This course is not open to students who have credit for European History 632.

627. Diplomatic History of the Far East. Three credit hours. Winter Quarter. Three class meetings each week. Prerequisite, History 426 or 427. Mr. Clyde.

This course is an advanced detailed study of the international relations of Japan and China with the western world. The course covers major events in modern Far Eastern diplomacy and attempts to explain the policies of the so-called Great Powers in the Far East, with particular reference to Russia, Great Britain, the United States and Japan. The course covers the period from 1895 to the present. Lectures, readings, and discussions.

628. Recent and Contemporary European History (1919-1926). Five credit hours. Spring Quarter. Five class meetings each week. Prerequisite, History 424, or European History 408. Mr. Washburne.

This course deals with the first phase of the reconstruction of Europe after the War, extending from the Armistice of 1918 to the entrance of Germany into the League of Nations, 1926. A study is made of the national and international problems involved in the attempted settlement of world conditions. It affords a survey of present-day Europe. Lectures, readings, and discussions.

* Not given in 1928-1929.

629. *The History of Modern Germany (1500-1914)*. Three credit hours. Spring Quarter. Prerequisite, History 401-402, or Senior standing with a major in History. Advanced students from other departments admitted with the consent of the instructor. Mr. Siebert.

A rapid survey of the development of modern Germany with emphasis upon the Lutheran revolt, the Thirty Years' War, the rise of Brandenburg, Germany *versus* Louis XIV, Frederick the Great, the humiliation of Germany by Napoleon Bonaparte, the regeneration of Germany, and the founding and development of the German Empire, to the World War. Lectures, collateral readings, and reports.

631. *Constitutional History of the United States to 1837*. Five credit hours. Spring Quarter. Five class meetings each week. Prerequisite, American History 401-402, or 403-404; or History 403-404, or 405-406; and two other Quarters in the social science field. Political Science 401 will be found a valuable adjunct to this course. Mr. Hockett.

Constitutional ideas of Americans in the Revolutionary Period, the formation of the federal Constitution; constitutional questions involved in the organization of the government, party controversies, and foreign relations; relations between the federal and state governments; the great decisions of the Supreme Court under John Marshall; the Missouri Compromise; the nullification episode. Lectures, discussions, and reports.

This course is not open to students who have credit for American History 602.

†632. *Constitutional History since 1837*. Five credit hours. Five class meetings each week. Prerequisites, same as for History 631. History 631 or American History 602 is a good foundation and Political Science 401 a valuable adjunct. Mr. Hockett.

Constitutional aspects of the slavery struggle, the Civil War and Reconstruction: questions relating to the power of Congress to regulate interstate commerce, levy an income tax, control trusts, etc.; constitutional problems resulting from the acquisition of territory in the War with Spain; recent amendments to the Constitution. Lectures, discussions, and reports.

This course is not open to students who have credit for American History 603.

633. *The Slavery Controversy in the United States*. Three credit hours. Autumn Quarter. Three class meetings each week. Prerequisites, American History 401-402, or 403-404; or History 403-404, or 405-406; and two other Quarters in the social science field. Mr. Cole.

The ante-bellum South and its destruction; the Civil War in the light of the forces which tended to hasten or obstruct the clash of arms. Lectures, readings, and discussions.

This course is not open to students who have credit for American History 604.

634. *Reconstruction and the New South (1863-1925)*. Three credit hours. Winter Quarter. Three class meetings each week. Prerequisites, same as for History 633. History 633 affords a good foundation. Mr. Cole.

The aftermath of the slavery struggle as traced in the reconstruction of the Southern States and in the readjustment of society and of the states to the new status of the negro, and to the economic forces of the last half century. Lectures, readings, reports, and discussions.

This course is not open to students who have credit for American History 605.

† Not given during the academic year 1928-1929.

635. American Diplomacy to the Close of the Civil War. Three credit hours. Winter Quarter. Three class meetings each week. Prerequisites, American History 401-402, or 403-404; or History 403-404, or 405-406; and two other Quarters in the social science field. Mr. Hill.

The foreign relations of the United States, beginning with the diplomacy which resulted in the establishment of independence and including such subjects as the struggle for neutral rights and commercial recognition, the extension of territory on the continent, the origin of the Monroe Doctrine, and the international controversies of the Civil War. Lectures, discussions, and reports.

This course is not open to students who have credit for American History 606.

636. American Diplomacy since the Civil War. Three credit hours. Spring Quarter. Three class meetings each week. Prerequisites, same as for History 635. Mr. Knight, Mr. Cole.

Problems in the diplomacy of the United States resulting from the Civil War, the development of the Monroe Doctrine, the acquisition of dependencies, relations with Latin America and the Orient, arbitration, the Isthmian Canal, and neutral rights during the Great War in Europe. Lectures, discussions, and reports.

This course is not open to students who have credit for American History 607.

637. Recent History of the United States (1875-1900). Four credit hours. Autumn Quarter. Four class meetings each week. Prerequisites, American History 401-402, or 403-404; or History 403-404, or 405-406; and two other Quarters in the social science field. Economics 401 and 402 will be found a valuable adjunct. Mr. Knight, Mr. Wittke.

An intensive study of the political, constitutional, industrial, and social life of the nation and states from the close of the Reconstruction Period to the Spanish-American War. It includes a consideration of new applications of the Constitution, industrial development, and third party movements. Lectures, discussions, and reports.

This course is not open to students who have credit for American History 608.

638. Recent History of the United States (1900-1925). Four credit hours. Winter Quarter. Four class meetings each week. Prerequisites, same as for History 637. Mr. Knight, Mr. Wittke.

An intensive study of the political, constitutional, industrial, and social life of the nation since the Spanish-American War. It includes the entry and participation of the United States in world politics, third party movements, rise of the new democracy, the World War and its aftermath as affecting this country. Lectures, discussions, and reports. This course is the natural continuation of History 637.

This course is not open to students who have credit for American History 609.

639. The Influence of Immigrant Groups upon United States History. Five credit hours. Spring Quarter. Five class meetings each week. Prerequisites, American History 401-402, or 403-404; or History 403-404, or 405-406; and two other Quarters in the social science field. Mr. Wittke.

The share of different immigrant groups in the building of the nation, from the colonial period to the present, with special emphasis on the influence of immigration upon American political, economic, social and cultural development. Lectures, readings, and discussions.

This course is not open to students who have credit for American History 611.

640. The Pioneer in American History to 1812. Three credit hours. Spring Quarter. Three class meetings each week. Prerequisites, American History 401-402, or 403-404; or History 403-404, or 405-406; and two other Quarters in the social science field. Mr. Hockett.

Westward expansion from the Atlantic Coast and the reasons for it; effects of the American environment; struggle with the French and Indians; plans of the British Government for the Mississippi Valley; the results of the Revolution; life of the pioneers. Lectures, discussions, and reports.

This course is not open to students who have credit for American History 612.

†641. The Pioneer in American History since 1812. Three credit hours. Spring Quarter. Three class meetings each week. Prerequisites, same as for History 640. History 640 affords a good introduction. Mr. Hockett.

The rise of new communities; their social, economic and political development and influence on national politics and institutions; trans-Mississippi exploration; the fur trade of the Far West; territorial acquisitions; discoveries of gold and silver; trans-continental railways; Indian wars; disappearance of the frontier. Lectures, discussions, and reports.

This course is not open to students who have credit for American History 613.

642. International Relations of Latin America. Three credit hours. Spring Quarter. Three class meetings each week. Prerequisite, History 435 or Senior standing with a major in history. Advanced students from other departments admitted with the consent of the instructor. Mr. Hill.

The interrelations of the Latin-American states; the relations of the Latin-American states with the major nations of the world. Lectures, readings, and reports.

This course is not open to students who have credit for American History 615.

651. The Great Historians, to the Nineteenth Century. Three credit hours. Winter Quarter. Prerequisites, four Quarters of history, and Senior standing. Required of candidates for the Doctor's degree. Mr. McNeal, with cooperation of other members of the department.

A study of the leading historical writers and schools of Europe, with selected readings from representative writers.

652. The Great Historians of the Nineteenth Century. Three credit hours. Spring Quarter. Prerequisites, History 651, four other Quarters of history, and Senior standing. Required of candidates for the Doctor's degree. Mr. Hockett, with cooperation of other members of the department.

A study of the leading European and American writers and schools of the last hundred years.

705-706-707. Honors Course. Three to five credit hours. Autumn, Winter, Spring Quarters. Informal conferences, the intent being to allow full scope to the initiative of the student. Prerequisites, Senior standing and forty hours of credit in history, with the record of "A" in at least half of the History courses and an average of "B" in the remainder. At least two Quarters required of candidates for the degree

† Not given during the academic year 1928-1929.

of Bachelor of Arts with Distinction in History. Mr. Wittke, with the cooperation of other members of the department.

A special topic is assigned to each student each Quarter, and results are tested by the requirement of theses and a special examination. Inability to attain a grade of "B" in this course will be a disqualification for special honors.

NOTE: TEACHING COURSES. For the Teaching Course in this department see the Department of Principles of Education, Course 700.

FOR GRADUATES

An undergraduate student shall not be permitted to take any course in the "800" group except by permission of the Graduate Council.

802-803-804. Seminary in American History.

806-807-808. Seminary in European History.

For description of graduate courses in this department, and for the requirements for advanced degrees, see the Bulletin of the Graduate School.

HISTORY OF EDUCATION

Office, 204 Education Building

PROFESSORS ANDERSON AND GOOD, ASSISTANT PROFESSOR ECKELBERRY,
MR. FAY AND DEPARTMENT ASSISTANT

401. The History of Elementary Education. Five credit hours. One Quarter. Autumn and Winter. Five lectures each week. Required of students preparing to teach in elementary schools. Mr. Eckelberry, Mr. Fay.

This course is not open to students who have credit for History of Education 404 or 405.

403. History of Pre-Renaissance Education. Three credit hours. One Quarter. Autumn, Winter, Spring. Three lectures each week. Prerequisite, one course in European history, philosophy, or psychology. Mr. Good, Mr. Eckelberry, Mr. Fay.

404. The History of Modern Education to 1750. Three credit hours. One Quarter. Autumn, Winter, Spring. Three lectures each week. Required in the College of Education. Prerequisite, one course in European history, philosophy, or psychology. Open to Juniors and Seniors. All instructors.

405. The History of Modern Education since 1750. Three credit hours. One Quarter. Autumn, Winter, Spring. Three lectures each week. Required in the College of Education. Prerequisite, one course in European history, philosophy, or psychology. Open to Juniors and Seniors. All instructors.

FOR ADVANCED UNDERGRADUATES AND GRADUATES

According to the University regulations, courses in this group are not open to Freshmen and Sophomores.

601. Educational Classics. Four credit hours. Winter Quarter. Four lectures each week. Mr. Anderson.

Readings in Plato, Aristotle, Plutarch, Quintilian, Montaigne.

This course is not open to students who have credit for History of Education 350 and 351.

602. Educational Classics. Four credit hours. Spring Quarter. Four lectures each week. Mr. Anderson.

Readings in Comenius, Locke, Rousseau, Pestalozzi, Herbart, Froebel.

This course is not open to students who have credit for History of Education 352 or 353.

605. History of Education in the United States to 1860. Two credit hours. Autumn Quarter. Two lectures each week. Mr. Good.

606. History of Education in the United States since 1860. Two credit hours. Spring Quarter. Two lectures each week. Mr. Good.

607. History of Industrial Education. Two credit hours. Winter Quarter. Two lectures each week. Mr. Anderson.

608. History of the American High School. Two credit hours. Autumn and Winter Quarters. Two lectures each week. Mr. Eckelberry.

An historical and comparative study of the American high school.

609. Present-Day Problems in Education, I. Two credit hours. Spring Quarter. Two lectures each week. Mr. Good.

A review in the light of their history of the most noteworthy of recent attempts to solve the most urgent problems in elementary and secondary school education.

***610. Present-Day Problems in Education, II.** Two credit hours. Spring Quarter. Two lectures each week.

An historical study of attempts at a solution of the more urgent educational problems of today. A continuation of History of Education 609.

611. The History of Education in Ohio. Two credit hours. Autumn Quarter. Prerequisite, History of Education 405. Mr. Eckelberry.

A study of the development of elementary, secondary and higher education in Ohio as related to the political, social and economic development of the state.

613. Comparative Education. Two credit hours. Winter Quarter. Two lectures each week. Mr. Anderson.

A survey with historical introduction, of existing systems of elementary and secondary education in Denmark, Germany, and in certain sections of the United States.

This course is not open to students who have credit for History of Education 603.

614. Comparative Education. Two credit hours. Spring Quarter. Two lectures each week. Mr. Anderson.

A survey, with historical introduction, of existing systems of education in England and France.

This course is not open to students who have credit for History of Education 604.

617. Great Teachers. Two credit hours. Spring Quarter. Two lectures each week. Mr. Good.

Comparative and historical studies of the personalities, methods, lives, and times of several eminent teachers: Socrates, Plato, Jesus, Quintilian, St. Augustine, Abelard, Vittorino, Melancthon, Agassiz, Kold, Arnold, Silliman, and others.

FOR GRADUATES

An undergraduate student shall not be permitted to take any course in the "800" group except by permission of the Graduate Council.

801. Seminary in the History of Education.

* Not given in 1928-1929.

*805. A Survey of Source Material and of General Literature in the Field of the History of Education Among the Ancient Greeks.

*806. A Survey of Source Material and of General Literature in the Field of the History of Education in Western Europe during the Roman and Medieval Periods.

* 807. A Survey of Source Material and of General Literature in the History of Education from the Beginning of the Italian Renaissance to the Middle of the Eighteenth Century.

808. A Survey of Source Material and of General Literature in the History of Education from the Middle of the Eighteenth Century.

809. Research in the History of Education.

For description of graduate courses in this department see the Bulletin of the Graduate School.

HOME ECONOMICS

Office, 220 Campbell Hall

PROFESSORS LANMAN, WALKER, AND McKAY, ASSISTANT PROFESSORS KENNEDY, DONNELLY, TURNBULL, AND DEADMAN, MRS. MINTON, MISS RYAN, MISS COOLEY, MISS ROHE, MISS HEINER, AND DEPARTMENT ASSISTANTS

401. Textiles and Clothing. Five credit hours. One Quarter. Autumn and Winter. Two lectures and three two-hour laboratory periods each week. Home Economics, first year. Prerequisite or concurrent, Fine Arts 426. Miss Ryan, Miss Turnbull, Miss Heiner.

The study of fibers and fabrics from an historic, economic, hygienic, and social standpoint. The laboratory work involves the planning of garments, the selection of materials, the fundamental principles of garment construction, the purchase and comparison of commercial products, and the care and repair of clothing.

402. Textiles and Clothing. Five credit hours. One Quarter. Winter and Spring. Two lectures and three two-hour laboratory periods each week. Home Economics, first year. Prerequisite, Home Economics 401, and Fine Arts 426; prerequisite or concurrent, Chemistry 402 or 412. Miss Ryan, Miss Turnbull, Miss Heiner.

A continuation of Home Economics 401, with the addition of drafting and elementary dress design.

403. Dress. Five credit hours. One Quarter. Autumn and Winter. Three three-hour periods each week for lecture and laboratory. Home Economics, second year. Prerequisite, Home Economics 402; prerequisite or concurrent, Fine Arts 436. Miss Ryan, Miss Heiner.

The relation of economics, hygiene, and art to dress; the designing and construction of garments. Special emphasis is placed on the selection, construction, care, and repair of wool garments.

409. Elements of Nutrition. Three credit hours. Winter Quarter. Three meetings for class discussion each week. Not open to students

* Not given in 1928-1929.

majoring in Home Economics. Elective to other Juniors and Seniors. Miss McKay.

A non-technical course in which the essentials of an adequate diet are introduced.

This course is not open to students who have credit for Home Economics 410.

410. Elements of Nutrition and Food Preparation. Five credit hours. Winter Quarter. Three meetings for class discussion and two two-hour laboratory periods each week. Not open to students majoring in home economics. Elective to other Juniors and Seniors. This course is of equal interest to men and women. Miss McKay.

A non-technical course in which the essentials of an adequate diet are introduced. Information thus presented is used in planning, preparing, and serving meals for the family group.

This course is not open to students who have credit for Home Economics 409.

411. Foods. Five credit hours. One Quarter. Autumn, Winter, Spring. Three three-hour periods each week for class discussion and laboratory. Special lectures, demonstrations, and trips are arranged to supplement classroom and laboratory work. Home Economics, second year. Prerequisite, Chemistry 402 or 412. Mrs. Minton, Miss Cooley.

An introduction to the study of the principles involved in the selection and preparation of food.

412. Foods. Five credit hours. One Quarter. Autumn, Winter, Spring. Three three-hour periods each week for class discussion and laboratory. Home Economics, second year. Prerequisite, Home Economics 411. Mrs. Minton, Miss Cooley.

A continuation of Home Economics 411, with emphasis on the planning, preparation and serving of meals for general home use.

418. Elements of Homemaking. Five credit hours. Spring Quarter. Five meetings for class discussion each week. Not open to students majoring in home economics. Elective to other Juniors and Seniors. This course is of equal interest to men and women. Mrs. Walker.

A non-technical course in which the principles of household administration are introduced. The course includes a survey of the factors influencing the general division of the family income and a survey of the principles of selection and purchase of clothing, and of textile materials and equipment for the home.

421. The Child in the Home. Three credit hours. Autumn Quarter. Three meetings for class discussion each week. Not open to students majoring in Home Economics. Elective to other Juniors and Seniors. Miss Deadman.

This course considers problems concerning the care and training of the child in the home.

501. Advanced Dress. Five credit hours. One Quarter. Autumn and Spring. Three three-hour periods each week for lecture and laboratory. Prerequisite, Home Economics 403. Miss Ryan, Miss Heiner.

An advanced study of the application of the principles of design to clothing construction.

502. Millinery. Three credit hours. One Quarter. Autumn and Spring. Three two-hour periods each week. Prerequisite or concurrent,

Home Economics 403. Not open to Freshmen and Sophomores. Miss Heiner.

The selection, construction, and renovation of hats.

511. Home Hygiene. Three credit hours. One Quarter. Autumn and Winter. Three meetings for class discussion each week. Home Economics, third year. Prerequisites, Home Economics 402, 412, Bacteriology 607, and Physiology 408. Miss Lanman.

A study of the interdependence of the home and of public agencies in securing and promoting hygienic and sanitary measures and practices, and of public agencies in promoting health.

512. House Furnishing. Five credit hours. One Quarter. Autumn, Winter, Spring. Three lectures and two two-hour laboratory periods each week. Prerequisites, Fine Arts 426 and Home Economics 402; prerequisite or concurrent, Engineering Drawing 438. Mrs. Walker.

The course includes a study of the evolution of the home, a brief history of architecture, ornament, and furniture, and a study of fundamental principles of house furnishing from a constructive, aesthetic, and economic standpoint.

FOR ADVANCED UNDERGRADUATES AND GRADUATES

According to the University regulations, courses in this group are not open to Freshmen and Sophomores.

611. Nutrition. Five credit hours. One Quarter. Autumn, Winter, Spring. Three meetings for class discussion and two two-hour laboratory periods each week. Home Economics, fourth year. Prerequisites, Home Economics 412, Physiology 408, and Agricultural Chemistry 403. Miss McKay.

A study of the fundamental principles of human nutrition and their application to the feeding of individuals and groups under varying physiological and economic conditions.

612. Advanced Nutrition. Five credit hours. Spring Quarter. Three two-hour periods each week for class discussion and laboratory; other hours to be arranged. Prerequisite, Home Economics 611. Miss McKay.

A continuation of Home Economics 611. A study of current literature on nutrition. Problems of feeding in connection with overweight, underweight, rickets, diabetes, and other abnormal conditions are discussed.

613. Field Work in Nutrition. Five credit hours. One Quarter. Autumn, Winter, Spring. One conference each week; other hours to be arranged. Elective. Prerequisite, Home Economics 611 and consent of instructor. Miss McKay.

An application of principles of nutrition to social and educational problems in schools, clinics, dispensaries, and homes.

614. Foods. Five credit hours. One Quarter. Autumn and Winter. Two meetings for class discussion and three two-hour laboratory periods each week. Prerequisites, Home Economics 611 and Economics 407 or 401-402. Miss McKay.

A study of foods with reference to purchasing, planning of menus and preparation of meals for groups of various income levels.

This course is not open to students who have credit for Home Economics 413.

615. Experimental Work in Food Preparation. Five credit hours. Winter Quarter. Three three-hour periods each week for class discussion and laboratory. Elective. Prerequisite, Home Economics 611. Mrs. Minton.

An application of scientific principles to problems involved in food preparation.

617. Household Management. Five credit hours. One Quarter. Autumn, Winter, Spring. Four lectures each week and laboratory to be arranged. Prerequisites, Home Economics 402, 412, 512, 611, and Economics 407 or 401. Mrs. Walker.

A study of the organization and management of the household with a view to securing the maximum of family welfare. Time is given to a consideration of the problems of expenditure through a study of relative values, examination of budgets, and discussion of factors influencing choice.

The Home Economics apartment and house where the students live in groups for a period of time, afford opportunity for experience.

618. The Purchase of Clothing and Household Furnishing. Five credit hours. Autumn Quarter. Three conferences each week; other hours to be arranged. Elective. Prerequisites, Home Economics 403, Economics 407 or 401, and Sociology 401. Mrs. Walker.

This course deals with social and economic factors involved in the purchase of clothing and household furnishing. Field work is arranged with wholesale and retail merchants.

621. Child Development. Five credit hours. One Quarter. Autumn, Winter, Spring. Four meetings for class discussion each week; laboratory to be arranged. Prerequisites, Psychology 401, and Home Economics 611; prerequisite or concurrent, Home Economics 617 and sociology. Miss Deadman.

The nature, development, care, and training of the child and the responsibility of society for providing for the physical, mental, and social needs of the child. The Home Economics Nursery School affords an opportunity for experience in dealing with problems of child care and management.

631. Institution Management. Five credit hours. One Quarter. Autumn, Winter, Spring. Credit will not be recorded until the following course, Home Economics 632, has been completed. Hours for discussion and laboratory to be arranged. Limited to five students. Prerequisites, Home Economics 611, Economics 407 or 401-402; prerequisite or concurrent, Home Economics 630. Mrs. Kennedy.

This course considers the preparation of food in large quantities, food cost accounting, efficiency problems, use and care of equipment and organization of employees. The laboratory work will be conducted in the Home Economics Cafeteria. No other course than Home Economics 630 is to be scheduled with this course. Inasmuch as more than the usual amount of time is required for Home Economics 631, some remuneration will be paid for a part of the work.

632. Institution Management. Five credit hours. One Quarter. Winter and Spring. Two three-hour periods each week for lecture and laboratory; other hours to be arranged. Prerequisites, Home Economics 631 and consent of the instructor; prerequisite or concurrent, Accounting 405, and Animal Husbandry 407. Accounting 606 is recommended as part of the sequence in Institution Management. Mrs. Kennedy.

This course considers the housing and food problems in various types of institutions.

The Home Economics Cafeteria, the Faculty Club, Ohio Union Cafeteria, and Pomerene Hall Refectory are used as laboratories. Observations are made in restaurants, tea rooms, hotels, schools, and hospitals.

633. School Lunchroom Management. Three credit hours. Autumn Quarter. One lecture and four hours laboratory each week. Prerequisite or concurrent, Home Economics 611. Mrs. Kennedy.

This course is arranged for those who wish to be prepared to manage school lunchrooms in connection with their teaching. It consists of a survey of equipment, organization, and management, with observations and practice in city and rural school lunchrooms.

641. Home Economics Teaching. Five credit hours. One Quarter. Autumn, Winter, Spring. Three meetings for class discussion each week; observations to be arranged. Elective for Juniors, Seniors, and graduate students. This course is offered to fulfill in part the requirements for state certification for teaching home economics. It is required that students registering for this course arrange their schedules so that they may have at least two half-days each week for observation trips. Prerequisites, twenty-five Quarter-credit hours in required courses. Prerequisite or concurrent, five additional hours in required home economics courses. Miss Donnelly, Mrs. Black.

This course is given as preparation for supervised teaching in home economics. Class discussion is concerned with the organization of home economics courses for various types of schools; the equipment of laboratories; classroom management and organization of home projects. Observations of home economics classes in urban and rural schools in social settlements are scheduled.

642. Supervised Home Economics Teaching. Five credit hours. One Quarter. Autumn, Winter, Spring. Hours for supervised teaching and individual conferences to be arranged. Schedule cards for the Quarter must be approved by those in charge of the course. Elective for Seniors and graduate students. This course is offered to fulfill in part the requirements for state certification for teaching home economics. Students registering for this course must arrange their schedules so that they may have five half-days each week free for supervised teaching. As soon as schedules are approved by the Registrar, each student electing this course should report to Miss Donnelly to fill out a card for student teaching assignments. Prerequisite, Home Economics 641; concurrent, Home Economics 643. Miss Donnelly, Mrs. Black, and critic teachers.

This course affords teaching opportunity in urban and rural schools and in social settlements.

701. Special Problems in Home Economics. Three to fifteen credit hours for one Quarter or more. To be given in units of three or five hours. Autumn, Winter, Spring Quarters. One conference or more each week. Prerequisite, twenty-five Quarter-credit hours in the required courses in Home Economics and consent of the instructor. Miss Lanman, Mrs. Walker, Miss McKay, Miss Donnelly, Mrs. Kennedy, Miss Deadman.

Readings and reports on home economics topics. Problems chosen for individual study.

FOR GRADUATES

An undergraduate student shall not be permitted to take any course in the "800" group except by permission of the Graduate Council.

801. Advanced Special Problems in Home Economics.

For description of graduate course in this department see the Bulletin of the Graduate School.

HORTICULTURE

Office, 118 Horticulture Building

PROFESSORS PADDOCK, AND HOTTES, ASSISTANT PROFESSOR SCHERER

445. Garden Flowers. Five credit hours. Spring Quarter. Four lectures and one three-hour laboratory period each week. Landscape Architecture, third year. Mr. Hottes.

458. General Forestry. Five credit hours. Winter Quarter. Four lectures and one quiz each week. Open to all students. No prerequisites. Mr. Scherer, with occasional lectures by members of the staff of the Central States Forest Experiment Station.

Forestry as a branch of agriculture, principal forest trees of the United States, the forest regions and condition of each in the United States, Canada and other world countries. Forest resources, forest and agricultural lands, forest products, uses of wood, forest influences, and what the forest can do for us on poor land. Treatment of the forest as a crop.

INDUSTRIAL ARTS

(See Industrial Engineering)

INDUSTRIAL ARTS EDUCATION

Office, 212 Industrial Engineering Building

PROFESSOR STONE, ASSISTANT PROFESSORS SMITH AND WARNER

There is opportunity in this department for men and women to major or minor in Industrial Arts Education; or to secure preparation in specific phases as outlined below:

I. Teaching and Supervising Practical Arts in the Elementary School; 541-542-543, 623, Principles of Education 430, 441.

II. Teaching Industrial Arts Education in the Junior or Senior High School; 606, 685, Principles of Education 410 and 440.

A. General Industrial Arts Laboratory or Shop, 400, 608.

B. Special Laboratory or Shop courses in

1. Wood and Cabinet work, 409-411-413, Industrial Engineering 411.

2. Drawing (in cooperation with the Departments of Fine Arts, Engineering Drawing, Architecture, and Civil Engineering)

3. Machine Shop Practice, Foundry, Forging, Sheet Metal Work, and Patternmaking (in cooperation with the Department of Industrial Engineering)

4. Electricity (in cooperation with the Department of Electrical Engineering)

5. Ceramics (in cooperation with the Departments of Fine Arts and Ceramic Engineering)

6. Printing (in cooperation with the Department of Journalism and the University Press)

III. Administration and Supervision of Industrial Arts Education, 625, 650

IV. General Shopwork Related to the Farm, 510.

V. Project Design in Various Industrial Arts Activities 450, 452.

VI. Occupational Studies, 610.

NOTE: Women students should be especially interested in the broad command of industrial and household information and skills available through courses 400, 541, 409-411-413.

400. General Industrial Arts Laboratory. Five credit hours. Autumn Quarter. One lecture and four three-hour laboratory periods each week. Introductory course; required of all men whose major or minor is Industrial Arts Education. Mr. Warner.

Orientation in varied industrial pursuits. Especially significant to teachers of general laboratory in high or continuation schools. At least one project required of each student in activities chiefly characteristic of cabinet work, patternmaking, bench metal, automechanics, electricity, cement, household mechanics, forging, foundry, drawing, and blue-printing.

409-411-413. Wood and Cabinet Work. Five credit hours. Autumn, Winter, Spring. Five three-hour periods each week for lecture and laboratory. Required of Industrial Arts Education students who elect the major in wood and cabinet work. Mr. Smith, Mr. Warner.

Designed for both men and women. Gives preparation in knowledge and skills relating to woods and woodworking tools and machines. Projects increase in difficulty and include activities in joinery, turning, carving, finishing and refinishing; upholstering, veneering, caning, art-fiber work, cabinet and furniture construction.

These courses are open for credit limited by work done by students in Industrial Arts Education 410-412-414-416.

430. Installation and Maintenance of School Shop Equipment. Three credit hours. Winter Quarter. One lecture and two three-hour laboratory periods each week. Required in Industrial Arts Education. Prerequisite, Junior standing or permission of the instructor. Mr. Smith.

A consideration of problems and standards involved in planning rooms and in the design, location, installation, and care of equipment in the various high school industrial arts laboratories. What should go into a laboratory and why. Training in tool grinding, saw filing, brazing, babbitting, belt lacing, and other phases of maintenance.

This course is not open to students who have credit for Industrial Education 525.

450. Project Design. Three credit hours. Spring Quarter. One lecture and two three-hour laboratory periods each week. Required in Industrial Arts Education. Prerequisite, Engineering Drawing 401. Mr. Smith.

Design of projects involving different industrial materials which are suitable for construction in the general industrial arts laboratory of the junior high school or in the specialized classes of the junior-senior high school. A consideration of materials, contours, enrichment, construction, and utility of projects.

This course is not open to students who have credit for Industrial Education 521.

452. Advanced Project Design. Three credit hours. Autumn Quarter. One lecture and two three-hour laboratory periods each week. Required in Industrial Arts Education. Prerequisites, Engineering Drawing 436, and Industrial Arts Education 450, or the equivalent. Mr. Warner.

Continues the work of Industrial Arts Education 450, adding a study of period style furniture with a consideration of harmony and unity in furnishings. Laboratory

consists of more advanced work in the design of projects involving wood, metal, clay, etc., and in the design of period furniture.

This course is not open to students who have credit for Industrial Education 522.

510. Shopwork Related to the Farm. Five credit hours. Winter Quarter. Five three-hour periods each week for lecture and laboratory. Mr. Smith.

This course is designed for students who expect to teach Smith-Hughes classes in Agriculture. Projects involve tools, materials, and operations typical of the farm—elementary carpentry, cabinetmaking, and mechanics; rope tying and splicing; soldering. This course should interest any student who desires an acquaintance with farm shop fundamentals.

†541. Practical Arts Laboratory for Teachers in Elementary Schools. Autumn Quarter. Three three-hour periods each week for lecture and laboratory. Required of students in Industrial Arts Education who elect the major Practical Arts in Elementary Schools.

Laboratory course involving use of practical arts tools and materials appropriate to activity curriculum in elementary grades. Projects deal with materials, processes, and products through which society supplies its needs for food, clothing, shelter, utensils, records. Examination of educational materials gathered from more than five hundred industries.

This course is open for credit limited by work done by students in Industrial Arts Education 500.

FOR ADVANCED UNDERGRADUATES AND GRADUATES

According to the University regulations, courses in this group are not open to Freshmen and Sophomores.

600. Introduction to Industrial Arts Education for Students of Education. Three credit hours. One Quarter. Autumn, Winter, Spring. Three recitation periods each week. Required of all men students in the College of Education during the third year. Mr. Stone, Mr. Warner.

Industrial arts education in the general curriculum. Brief historical resume, emphasizing present status and trends of industrial arts education as a motivating, activating means to integration and command of fundamentals in elementary grades; a differentiating, exploratory medium in junior high school; prevocational preparation in the senior high school. Terminology; leaders; principles.

This course is not open to students who have credit for Industrial Education 626.

606. Specialized Industrial Arts Curricula in the Junior and Senior High School. Three credit hours. Autumn Quarter. Three recitation periods each week. Required of all men in Industrial Arts Education. Prerequisites, Industrial Arts Education 430 and 450, or permission of the instructor. Mr. Stone.

Principles and practice in defining specific curriculum objectives. Technique of analysis applied to various occupations for the selection of facts and activities conducive to desirable knowledge, skills, and behaviour; and the organization of such materials into integrated curricula.

This course is not open to students who have credit for Industrial Education 524.

608. General Industrial Arts Curriculum in the Junior High School. Three credit hours. Winter Quarter. Three recitation periods each week. Required of all men in Industrial Arts Education. Prerequisites, Indus-

† Not given during the academic year 1928-1929.

trial Arts Education 430 and 450, or permission of the instructor. Mr. Warner.

Principles and practice in defining specific objectives, and in selecting and organizing industrial arts activities in the junior high school general industrial arts laboratory. Study and evaluation of the processes, products, and personnel of industry by means of construction, investigation, and experiment.

610. Occupational Studies in the Junior and Senior High School. Three credit hours. Spring Quarter. Three recitation periods each week. Elective in Industrial Arts Education. Prerequisite, permission of the instructor. Mr. Stone.

A course designed especially for teachers of occupations in junior and senior high and continuation schools. Attention is given to the development of a technique for gathering, evaluating, and presenting significant occupational data, to the end that youth may become self-reliant in occupational study and choice.

623. The Teaching and Supervision of Practical Arts in the Elementary School. Three credit hours. Spring Quarter. Three recitations each week. Prerequisites, Industrial Arts Education 600, 541, or permission of instructor in charge. Mr. Stone.

For teachers and supervisors in elementary education who wish to use Practical Arts as an integrating motivating element in an activity curriculum. Criteria for selecting different types of activities and projects. Teaching plans involving various kinds of materials and activities.

This course is not open to students who have credit for Industrial Arts Education 604.

625. Organization and Supervision of Industrial Arts Education in the Junior and Senior High School. Three credit hours. Autumn Quarter. Prerequisites, Senior standing and permission of the instructor. Mr. Smith.

Relation of industrial arts education to the general curriculum. Courses of study; laboratory and shop provisions in building plans; equipment; relative cost; class and shop organization, and the development of an effective program of supervision; selection of teachers and their improvement in service.

650. Minor Problems in Industrial Arts Education. One or more credit hours. Autumn, Winter, Spring Quarters. Prerequisite, twenty-five hours in industrial arts education and consent of the instructor. Mr. Stone.

This course offers opportunity for intensive study or investigation of specific phases of industrial arts education. Appropriate topics are found in the curriculum; laboratory or shop equipment; student records; building standards; correlation of courses; standards of measurement for teachers or students; and other problems of organization, administration, supervision, or instruction.

685. The Teaching of Industrial Arts in the Secondary School. Three credit hours. Winter Quarter. Three recitation periods each week. Required in the curriculum in Industrial Arts Education. Prerequisites, Senior standing, or permission of instructor in charge. Mr. Smith.

The application of basic teaching principles to the common problems of Industrial Arts classroom, laboratory, or shop. Teaching plans, procedures, and devices for the improvement of instruction.

This course is not open to students who have credit for Industrial Education 524 or Industrial Arts Education 606.

NOTE: To meet the requirements in Observation and Participation and Supervised Teaching, students who are majoring in Practical Arts in the Elementary School should register in Principles of Education 430 and 441 in the Spring Quarter of the fourth year; others majoring in Industrial Arts Education should register in Principles of Education 410 and 440 in the Spring Quarter of the fourth year.

FOR GRADUATES

An undergraduate student shall not be permitted to take any course in the "800" group except by permission of the Graduate Council.

801-802-803. Seminary in Industrial Arts Education.

804. Major Research Problems in Industrial Arts Education.

For description of graduate courses in this department, see the Bulletin of the Graduate School.

NOTE: In addition to the graduate courses listed under the heading, "Industrial Arts Education," students may elect not to exceed nine hours from the following courses offered by other departments and count them toward the major in Industrial Arts Education for the Master's degree:

Economics (637) Industrial Relations. Three credit hours.

Psychology (608) Educational Statistics: Elementary. Three credit hours.

Psychology (638) Industrial and Vocational Psychology Laboratory. Three credit hours.

Psychology (639) Psychology and Personnel. Three credit hours.

Public Health (603) Industrial Hygiene. Three credit hours.

Vocational Education (607) Vocational Counseling. Two credit hours.

Minors may be chosen in the departments of Business Organization, Vocational Education, School Administration, Psychology, Economics, Principles and Practice of Education, Fine Arts, or in other departments approved by the instructor in charge of the major.

INDUSTRIAL ENGINEERING

Office, 119 Industrial Engineering Building

PROFESSORS YOUNGER AND W. A. KNIGHT, MR. FOUST, MR. DENMAN, MR. WRIGHT, MR. SCHNEIDER, MR. RICKLY, MR. MORRISON AND
DEPARTMENT ASSISTANTS

405. Foundry Practice. Three credit hours. One Quarter. Autumn, Winter, Spring. One recitation, six laboratory hours each week. Mr. Schneider.

Laboratory practice in bench, floor and machine moulding, cupola operation, and core making. Recitations cover foundry tools and appliances. Foundry materials—sands, clays, facings, fluxes, and core binders. Mixtures for gray iron, brass, bronze, and aluminum. Founding losses and production methods.

This course is not open to students who have credit for Shopwork 405.

407. Metal Bench Work. Two credit hours. One Quarter. Autumn, Winter, Spring. One recitation, four laboratory hours each week. Mr. Rickly, Mr. Morrison.

Laboratory practice in sheet metal work, soldering and brazing, hand and power chipping, filing, fitting, scraping, light drilling, tapping, and punch press work.

This course is not open to students who have credit for Shopwork 407.

408. Millwrighting. Two credit hours. One Quarter. Autumn, Winter, Spring. One recitation, four laboratory hours each week. Prerequisite, Industrial Engineering 407. Mr. Rickly, Mr. Morrison.

Practical consideration given to the use and care of belting, erection of shafting, setting and alignment of machines, fastenings of various kinds, babbitting, pipe fitting, and autogenous welding.

This course is not open to students who have credit for Shopwork 408.

411. Patternmaking. Three credit hours. One Quarter. Autumn, and Winter. One recitation, six laboratory hours each week. Mr. Denman.

Laboratory practice in modern methods of patternmaking in a well-equipped shop. Recitations cover general principles of patternmaking, woods used, glued joints, methods of building up, draft, shrinkage, coating, and storage.

This course is not open to students who have credit for Shopwork 411.

415. Forging and Heat Treating. Three credit hours. One Quarter. Autumn and Winter. One recitation, six laboratory hours each week. Mr. Foust.

Laboratory practice begins with plain, simple forgings in iron and steel, progresses through power hammerwork, and finishes with heat treatment of iron and steel. Particular attention paid to faults developed through underheating or overheating in welding and insufficient energy in hammerblows.

This course is not open to students who have credit for Shopwork 415.

416. Forging and Sheet Metal Work. Three credit hours. One Quarter. Autumn, Winter, Spring. One recitation, six laboratory hours each week. Required in Industrial Arts Education. Mr. Foust, Mr. Morrison.

Laboratory practice in light forging, sheet metal work, pipe fitting, wire splicing, and soldering.

This course is not open to students who have credit for Shopwork 416.

419. Elementary Machine Work. Three credit hours. One Quarter. Autumn, Winter, Spring. One recitation, six laboratory hours each week. Required in Industrial Arts Education. Mr. Wright, Mr. Rickly, Mr. Morrison.

Laboratory practice on lathe, shaper, and drill press. Includes the fundamental operations on the lathe of straight, shoulder, and taper turning, facing, screw cutting, shuck and face plate work, boring, reaming, filing, and polishing. Elementary practice on the drill press and shaper.

This course is not open to students who have credit for Shopwork 419.

421. Advanced Machine Work. Three credit hours. One Quarter. Autumn, Winter, Spring. One recitation, six laboratory hours each week. Prerequisite, Industrial Engineering 419. Mr. Knight, Mr. Wright, Mr. Rickly.

A continuation of Industrial Engineering 419, with more advanced practice on the lathe, planer, shaper, plain and universal milling machines, grinders, turret lathe, and drill press. Work organized and carried out on a production basis, with standard time, interchangeable parts, work limits, inspection, and assembly.

This course is not open to students who have credit for Shopwork 421.

FOR ADVANCED UNDERGRADUATES AND GRADUATES

According to the University regulations, courses in this group are not open to Freshmen and Sophomores.

623. Advanced Machine Work. Three credit hours. One Quarter. Autumn, Winter, Spring. One recitation, six laboratory hours each

week. Prerequisites, Industrial Engineering 419 and 421. Mr. Knight, Mr. Wright, Mr. Rickly.

A course that gives practice corresponding to that of the tool and maintenance divisions of commercial shops. Tools, jigs, fixtures, development work, and repairs furnish the necessary exercises.

This course is not open to students who have credit for Shopwork 523.

ITALIAN

(See Romance Languages and Literatures)

JOURNALISM

Office, Journalism Building

PROFESSORS MYERS AND HOOPER, ASSISTANT PROFESSOR GETZLOE,
MR. O'BRIEN, MR. MORRILL

401. News-Collecting and News-Writing. Five credit hours. One Quarter. Autumn, Winter, Spring. Three recitations and two laboratory periods each week on the Lantern. Not open to Freshmen. Mr. Myers, Mr. Getzloe, Mr. Morrill.

Training of reporters by theory and practice. Laboratory work is done on the University daily paper, the Lantern, which is organized and operated as nearly like a city newspaper as possible.

402. News-Collecting and News-Writing. Five credit hours. One Quarter. Autumn, Winter, Spring. Three recitations and two laboratory periods each week on the Lantern. Prerequisite, Journalism 401. Mr. Myers, Mr. Getzloe.

A continuation of Journalism 401.

501. Copyreading. Three credit hours. One Quarter. Autumn and Spring. Two recitations and one laboratory period each week on the Lantern. Prerequisite, Journalism 401-402. Mr. Myers.

Editing of copy, headline writing, re-writing, and general desk work.

502. Feature Writing. Three credit hours. One Quarter. Winter and Spring. Two recitations and one laboratory period each week on the Lantern. Prerequisite, Journalism 401-402. Mr. Getzloe.

Instruction in and writing of special newspaper and magazine articles, together with investigation as to the market for such matter.

513. Newspaper Ethics and Principles. Three credit hours. One Quarter. Autumn and Spring. Three recitations each week. Prerequisite, Journalism 401-402. Mr. Myers, Mr. Getzloe.

The rights and duties of the press, its morals, its standards, and its part in community, state, and national life.

517. Newspaper History and Comparative Journalism. Five credit hours. Winter Quarter. Five recitations each week. Mr. Hooper.

Origin and growth of journalism in America, with consideration of the beginning and present state of journalism in other lands. Notable editors and publishers and mutual influence of the press and democracy.

518. Newspaper Organization. Five credit hours. One Quarter. Autumn and Spring. Five recitations each week. Mr. Hooper.

Survey of the news, editorial, business, and mechanical departments with discussion of the opportunities and responsibilities of those in various posts. History of printing and a survey of the primitive and modern methods of printing and illustrating.

FOR ADVANCED UNDERGRADUATES AND GRADUATES

According to the University regulations, courses in this group are not open to Freshmen and Sophomores.

621. Editorial Writing. Three credit hours. One Quarter. Autumn and Spring. Three recitations each week. Mr. Hooper, Mr. Getzloe.

Study of the purpose, form, style, and spirit of the editorial, as well as the responsibility of the writer to the newspaper, the community, and the profession. Consideration of current events, practice in news interpretation and other editorial writing, and study of editorial pages.

622. Public Opinion in the Making. Three credit hours. Winter Quarter. Three recitations each week. Mr. Hooper.

Study of the newspaper's part, through news-selection and display, through editorial-writing, and in the dramatic, music, and literary departments. Current events and practice editorial-writing.

NOTE: TEACHING COURSES. For the Teaching Course in this department see the Department of Principles of Education, Course 716.

LATIN LANGUAGE AND LITERATURE

(See Classical Languages and Literature)

MANUAL ARTS

(See Industrial Arts Education)

MATHEMATICS

Offices, 307, 314, 315, and 317 University Hall

PROFESSORS KUHN, McCOARD, RASOR, C. C. MORRIS, ARNOLD, BLUMBERG,
AND WEAVER, ASSISTANT PROFESSORS BAREIS, BEATTY, CARIS,
RICKARD, BUMER, MacDUFFEE, AND MICHAL, MISS HOBENSACK,
MISS JONES, AND DEPARTMENT ASSISTANTS

The following sequences in Mathematics are recommended:

I. For teachers of mathematics in secondary schools and junior colleges:

- (1) 421, 422, 423, or 431, 432, 433, followed by 441, 442.
- (2) 641, 601, 443
- (3) 621, 623, 684, 685
- (4) Principles of Education 735 (Teaching of Mathematics)

In this group, sequence (1) should be supplemented by two or more elections from each of the sets (2) and (3).

II. Those preparing to teach in colleges and universities or to work in the more advanced fields of mathematics, after completing 443 should advise with members of the department with reference to elections. It is recommended that all such students acquire a reading knowledge of French, German, and Italian as early as possible.

III. For business purposes:

421 or 432, 429, 435, 430

IV. For actuarial work:

First year: 421, 422, 423, or 431, 432, 433
Second year: 441, 442, 443
Third year: 429, 430, 691, 692, 693
Fourth year: 694, 696

V. For statistical work:

First year: 421, 422, 423, or 431, 432, 433
Second year: 441, 442, 443, 429
Third year: 601, 691, 611
Fourth year: 692, 696, 697

421. College Algebra. Five credit hours. One Quarter. Autumn and Winter. Five recitations each week. Prerequisites, one unit of entrance algebra and one unit of entrance geometry. All instructors.

Fundamental ideas and topics of college algebra. Designed, along with the allied courses, Mathematics 422, 429, and 435, to give students in the arts and sciences a conception of the character and possibilities of modern mathematics, especially in relation to its uses in other subjects.

422. Plane Trigonometry. Five credit hours. One Quarter. Winter and Spring. Five recitations each week. Prerequisites, one unit of entrance algebra and one unit of entrance geometry. All instructors.

Solution of right and oblique triangles, theory and use of logarithms, solution of trigonometric equations and identities, various applications to the arts and sciences.

423. Analytic Geometry. Five credit hours. Spring Quarter. Five recitations each week. Prerequisites, Mathematics 421 and 422. All instructors.

429. Mathematics of Finance. Five credit hours. One Quarter. Autumn and Winter. Five recitations each week. Prerequisite, Mathematics 421 or 432. Mr. Kuhn, Mr. Morris.

The principles of interest and discount with applications to annuities, sinking funds, capitalization, depreciation, valuation of bonds, building and loan associations.

430. Mathematics of Insurance. Five credit hours. Spring Quarter. Five recitations each week. Prerequisite, Mathematics 429. Mr. Kuhn, Mr. Morris.

Computations of premiums and reserves for life annuities and insurance, for health and accident insurance; application of life annuities to the evaluation of life estates.

431. Plane Trigonometry. Five credit hours. One Quarter. Autumn and Winter. Five recitations each week. Prerequisites, one and one-half units of entrance algebra and one unit of entrance geometry or Mathematics 400 and one unit of entrance geometry. All instructors.

432. College Algebra. Five credit hours. One Quarter. Winter and Spring. Five recitations each week. Prerequisites, one and one-half units of entrance algebra and one unit of entrance geometry or Mathematics 400 and one unit of entrance geometry. All instructors.

433. Analytic Geometry. Five credit hours. One Quarter. Autumn and Spring. Five recitations each week. Prerequisites, Mathematics 431 and 432. All instructors.

435. Elementary Mathematical Statistics. Five credit hours. Winter Quarter. Five recitations each week. Prerequisite, Mathematics 421 or 432. Mr. Morris.

Representation of statistical data by difference, frequency and logarithmic curves; averages; statistical constants; total and partial correlation; index numbers; formulas used in mental measurement tests; the normal curve; applications in economics, biology, psychology, and educational research.

441-442-443. Calculus. Five credit hours. Three Quarters. 441, Autumn and Winter; 442, Autumn, Winter, Spring; 443, Autumn, Winter, Spring. Five recitations each week. Prerequisite, Mathematics 423 or 433. All instructors.

FOR ADVANCED UNDERGRADUATES AND GRADUATES

According to the University regulations, courses in this group are not open to Freshmen and Sophomores.

601. Advanced Calculus. Five credit hours. Autumn Quarter. Five recitations each week. Prerequisite, Mathematics 443. Mr. Weaver. Selected topics from Wood's Advanced Calculus.

611. Differential Equations. Five credit hours. Winter Quarter. Five recitations each week. Prerequisite, Mathematics 443.

***612. Differential Equations.** Five credit hours. Spring Quarter. Five recitations each week. Prerequisite, Mathematics 611.

***617. Introduction to Modern Mathematics.** Five credit hours. Autumn Quarter. Five recitations each week. Prerequisite, ten credit hours in mathematics beyond Mathematics 443, or permission of the instructor. Mr. Blumberg.

The principal aim of this course is not the imparting of comprehensive information but the initiation of the student, by means of lectures, collateral reading and problems, into various mathematical domains. The content will be selected from the following fields: Graphical and Numerical Methods, Projective Geometry, Theory of Numbers, the Mathematical Continuum, Mathematical Foundations, Point-Sets, Groups, Probability, and Relativity.

621. Advanced Euclidian Geometry. Five credit hours. Winter Quarter. Five recitations each week. Prerequisite, Mathematics 442. Mr. Weaver.

Geometric constructions: points, lines and circles associated with a triangle; harmonic ranges and pencils; harmonic properties of the circle; radical axis; pole and polar with respect to a circle; inversion; symmedian points; Brocard points. This is chiefly a problem course in the field of plane geometry, and is of special value to teachers of the subject.

623. Projective Geometry. Five credit hours. Spring Quarter. Five recitations each week. Prerequisite, Mathematics 443. Miss Bareis.

Projection and section, duality, cross ratio, involution. Theorems of Desargues, Pascal and Brianchon, construction problems of the first and second degree.

625. Solid Analytic Geometry. Five credit hours. Autumn Quarter. Five recitations each week. Prerequisite, Mathematics 443. Miss Bareis.

Systems of coordinates; planes and lines; types of surfaces; quadric surfaces; duality.

641. Elementary Theory of Equations. Five credit hours. Autumn Quarter. Five recitations each week. Prerequisite, Mathematics 443. Mr. Kuhn.

Construction with ruler and compasses, numerical equations, determinants, symmetric functions. Text: Dickson's First Course in the Theory of Equations.

***661. Vector Analysis.** Five credit hours. Spring Quarter. Five recitations each week. Prerequisites, Mathematics 601 and Physics 408 or 433, or the equivalent. Mr. Bumer.

Vector and scalar algebra and geometry, differentiation and differential operators, applications to electrical theory and to mechanics, dynamics, and hydro-dynamics.

* Not given in 1928-1929.

671. Introduction to the Theory of Relativity. Five credit hours. Autumn Quarter. Five recitations each week. Prerequisite, Mathematics 661.

This course will be prefaced by a brief review of those parts of the classical theories of dynamics and physics which are necessary to an understanding of the special theory of relativity, its applications, and the elementary aspects of the general theory of relativity.

684. Materials and Concepts of Elementary Mathematics. Five credit hours. Winter Quarter. Five recitations each week. Prerequisite, Mathematics 443. Mr. Arnold.

A critical review of the selection of the materials of secondary mathematics—the history of the development of this material and its underlying concepts. Systems of axioms for algebra; for geometry; the axiom of parallels. The Non-Euclidian Geometries. Constructions with ruler and compass. Variables, limits, number, infinity, transcendence.

***685. The History of Mathematics.** Five credit hours. Spring Quarter. Five recitations each week. Prerequisite, Mathematics 443. Mr. Arnold.

A survey of the development of elementary and secondary mathematics in ancient, medieval, and modern times, including a sketch of the history and teaching of mathematics in the United States.

691. Probability. Five credit hours. Autumn Quarter. Five recitations each week. Prerequisite, Mathematics 443. Mr. Morris.

The first half of the course will be devoted to the development of the theory of probability from the standpoint of permutations, combinations, choice and chance; the second half to a formal development of the subject as given by Coolidge in "Introduction to Probability."

692. Finite Differences. Five credit hours. Winter Quarter. Five recitations each week. Prerequisite, Mathematics 443. Mr. Bumer.

An introduction to finite differences; development of the more important methods of interpolation and summation.

696. Mathematical Statistics. Five credit hours. Winter Quarter. Five recitations each week. Prerequisite, Mathematics 691. Mr. Morris.

Derivation of statistical formulas by use of the theory of probability; least squares and their application to observational equations; curve fitting.

697. Statistical Methods of Forecasting. Five credit hours. Spring Quarter. Five recitations each week. Prerequisite, Mathematics 696. Mr. Morris.

The application of the theory of probability to forecasting; weighting of biometric series by least squares; seasonal variations; curves of trend.

NOTE: TEACHING COURSES. For the Teaching Course in this department see the Department of Principles of Education, Course 735.

FOR GRADUATES

An undergraduate student shall not be permitted to take any course in the "800" group except by permission of the Graduate Council.

800. Seminary in Mathematics.

801. Reading and Research.

805. Functions of a Real Variable.

806. Theory of Functions of a Complex Variable.

* Not given in 1928-1929.

- *812. Point-Sets.
- 814. Methods of Analysis I.
- 815. Methods of Analysis II.
- *816. Calculus of Variations.
- *822. Non-Euclidian Geometry.
- 827. Differential Geometry.
- *841. Finite Groups.
- *850. Theory of Numbers.
- *851. Introduction to Higher Algebra.
- 852. Algebraic Invariants.
- 854. Continuous Groups.
- *855. Algebraic Numbers.
- *856. Hypercomplex Numbers.
- 857. Theory of Matrices.
- *861. Fourier's Series and Spherical Harmonics.
- 865. Functional Operations I.
- 866. Functional Operations II.
- *891. Mathematical Theory of Statistics.

For description of graduate courses in this department see the Bulletin of the Graduate School.

METEOROLOGY

(See Geology 420)

MILITARY SCIENCE AND TACTICS

Office, The Barracks

COLONEL TOWNSEND; MAJORS MILLER, HARPER, McALPINE, AND SULLIVAN; CAPTAINS BARRY, MINUS, ATKINSON, HANEY, FOY, JONES, HOPKINS, BRANSON, FUREY, AND LONG; LIEUTENANTS ECKERT, HOLMES, ATKINSON, SMITH, HORNE, ODELL AND MACK;
NON-COMMISSIONED OFFICERS OF INFANTRY AND
FIELD ARTILLERY

In accordance with the Morrill Act, passed in 1862, under which the University was established, military instruction must be included in the curricula. The Board of Trustees therefore requires all male students, both special and regular, unless excused by the Department of Military Science and Tactics, to receive military instruction during the first two years in Infantry or Field Artillery, the choice at the option of the student.

After one year's training in Infantry or Field Artillery, students who are regularly enrolled in either the curriculum in Electrical Engineering or in Engineering Physics may apply for transfer to the Signal Corps. Selected applicants enter the Signal Corps at the beginning of their Sophomore year.

The Reserve Officers' Training Corps was established under the National Defense Act of June 3, 1916, and June 4, 1920, the required two years' work being included in its four-year course, the third and fourth years being elective. Instruction is given in Infantry, Field Artillery, Signal Corps, Veterinary, Dental, and Medical Units. Twenty-two commissioned officers, and twenty-five enlisted men of the Regular Army are detailed as instructors.

Uniform is furnished Freshmen upon deposit of \$27.00 being made with the Bursar. The Government allows \$7.15 per year commutation of uniforms which is paid to the student by the Bursar at the close of the Spring Quarter of each academic year. The uniform is required to last two years. Advanced course students are furnished a daily

* Not given in 1928-1929.

compensation from the Government for two years, plus the annual commutation of uniform. For the year 1927-1928 the compensation has been thirty cents a day.

The total credit in this department allowed toward a degree is 18 Quarter-hours, exclusive of Infantry 401, 402, 403, 404, 405, 406, or Field Artillery 421, 422, 423, 424, 425, 426, required of all male students in the first and second years, for which 6 credit hours is granted; and exclusive of Signal Corps 444, 445, 446, for which 3 credit hours is granted.

INFANTRY

401. Infantry. One credit hour. Autumn Quarter. One recitation and two practical periods each week. Infantry instructors.

Instruction in command and leadership.

402. Infantry. One credit hour. Winter Quarter. Three recitations each week. Infantry instructors.

Instruction in rifle marksmanship, military hygiene and first aid; command and leadership and military courtesy.

403. Infantry. One credit hour. Spring Quarter. One recitation and two practical periods each week. Infantry instructors.

Instruction in command and leadership.

404. Infantry. One credit hour. Autumn Quarter. One recitation and two practical periods each week. Prerequisites, Military Science 401, 402, 403. Infantry instructors.

Instruction in command and leadership, infantry weapons—musketry.

405. Infantry. One credit hour. Winter Quarter. Three recitations each week. Infantry instructors.

Instruction in interior guard duty, scouting and patrolling and automatic rifle.

406. Infantry. One credit hour. Spring Quarter. One recitation and two practical periods each week. Infantry instructors.

Instruction in command and leadership.

507. Advanced Infantry. Three credit hours. Autumn Quarter. Three recitations and two practical periods each week. Elective. Prerequisites, Military Science 401, 402, 403 or equivalents, and 404, 405, 406. Infantry instructors.

Instruction in command and leadership, field engineering, military sketching and map reading.

508. Advanced Infantry. Three credit hours. Winter Quarter. Three recitations and two practical periods each week. Elective. Infantry instructors.

Instruction in machine guns.

509. Advanced Infantry. Three credit hours. Spring Quarter. Three recitations and two practical periods each week. Elective. Infantry instructors.

Instruction in command and leadership and combat principles.

510. Advanced Infantry. Three credit hours. Autumn Quarter. Three recitations and two practical periods each week. Elective. Prerequisites, Military Science 507, 508, 509. Infantry instructors.

Instruction in command and leadership, combat principles, company administration and military law.

511. Advanced Infantry. Three credit hours. Winter Quarter. Three recitations and two practical periods each week. Elective. Infantry instructors.

Instruction in military history, combat principles, and infantry weapons.

512. Advanced Infantry. Three credit hours. Spring Quarter. Three recitations and two practical periods each week. Elective. Infantry instructors.

Instruction in command and leadership, combat principles and infantry weapons.

FIELD ARTILLERY

421. Field Artillery. One credit hour. Autumn Quarter. Three recitations each week. Field Artillery instructors.

Dismounted instruction. Service of the piece. Field Artillery materiel.

422. Field Artillery. One credit hour. Winter Quarter. Three recitations each week. Field Artillery instructors.

Animal management for Field Artillery. Basic subjects of military science.

423. Field Artillery. One credit hour. Spring Quarter. One one-hour and one two-hour period each week, practical work. Field Artillery instructors.

The cannoner, the firing battery, the battery mounted, ceremonies, pistol instruction.

424. Field Artillery. One credit hour. Autumn Quarter. One hour recitation and two hours practical work each week. Prerequisites, Military Science 421, 422, 423. Field Artillery instructors.

Dismounted ceremonies, equitation.

425. Field Artillery. One credit hour. Winter Quarter. Three recitations each week. Field Artillery instructors.

Field Artillery motors and motor transportation, animal management.

426. Field Artillery. One credit hour. Spring Quarter. One one-hour and one two-hour period each week, practical work. Field Artillery instructors.

Driving and principles of draft, the battery mounted, students acting as drivers. ceremonies.

527. Advanced Field Artillery. Three credit hours. Autumn Quarter. Three recitation hours and two practical hours each week. Elective. Prerequisites, Military Science 424, 425, 426. Field Artillery instructors.

Miscellaneous Field Artillery subjects, communications, equipment of the Field Artillery arm; advanced equitation, exercise of command and leadership as cadet officers or non-commissioned officers, Field Artillery tactics and technique.

528. Advanced Field Artillery. Three credit hours. Winter Quarter. Three one-hour and one two-hour periods each week. Elective. Field Artillery instructors.

Advanced gunnery, including blackboard and terrain board conduct of fire.

529. Advanced Field Artillery. Three credit hours. Spring Quarter. One one-hour and one two-hour period each week, practical work. Elective. Field Artillery instructors.

Conduct of fire including smoke bomb firing, the battery mounted, the firing battery, students acting as non-commissioned officers, ceremonies.

530. Advanced Field Artillery. Three credit hours. Autumn Quarter. Three recitation hours and two practical hours each week. Elective. Prerequisites, Military Science 527, 528, 529. Field Artillery instructors.

Study of typical campaigns and battles, the military policy of the United States military law, exercise of command and leadership as cadet officers. Advanced equitation.

531. Advanced Field Artillery. Three credit hours. Winter Quarter. Three one-hour and one two-hour periods each week. Elective. Field Artillery instructors.

Organization and administration of the Army of the United States, tactics and strategy of the combined arms, practical gunnery.

532. Advanced Field Artillery. Three credit hours. Spring Quarter. One one-hour and two two-hour periods each week, practical work. Elective. Field Artillery instructors.

The battery mounted, the firing battery, students acting as officers, ceremonies.

SUMMER CAMPS

As a part of the instruction of the Reserve Officers' Training Corps, summer camps are conducted for the Advanced Course students. The camps for this Corps Area are held for the Infantry and Field Artillery at Camp Knox, Ky., thirty-one miles from Louisville; for the Signal Corps at Camp Vail, N. J., and for the Medical, Dental and Veterinary Corps at Carlisle Barracks, Pa. The Advanced Course Camp is normally attended between the third and fourth years and is required. For special reasons, some students are permitted to attend during the summer of the Sophomore year before entering upon the work of the Advanced Course or during the Summer of the Senior year after the work of the fourth year is completed.

These camps are of six weeks' duration and the work is mostly practical. In addition to military work, field sports and competitions are conducted. The training for Infantry includes firing on the target range with service rifles and using ball ammunition in combat exercises. The training for Field Artillery includes firing field guns with service ammunition. Signal Corps instruction includes the establishment and operation of radio stations in the field and field problems with the Infantry and Field Artillery involving application of training and communication engineering.

The Government furnishes transportation to and from the camps. While in camp, clothing, subsistence, medical attention, and entertainment are provided.

The students attending advanced course camp receive, in addition to the above, a salary of seventy cents per day.

The development of leadership and discipline are primary objects of these camps.

Students enrolled in the Freshman and Sophomore classes of the R. O. T. C. who attend a Citizens' Military Training Camp and successfully complete the course of instruction thereat are granted two hours University credit. This credit is not accepted in lieu of any of the required courses in Military Science.

MUSIC

Office, 100 Music Building

PROFESSOR HUGHES, ASSOCIATE PROFESSOR LEEDER, ASSISTANT PROFESSORS WILSON AND JONES, MISS ALEXANDER, MRS. WILSON

430. History and Appreciation. Four credit hours. Winter Quarter. Four lectures each week. No prerequisite. Mr. Hughes, Miss Alexander.

An introduction to the appreciation of music. Study of the factors involved in intelligent listening with special reference to musical form. Early history of the art.

This course is not open to students who have credit for Music 301 or 302.

431. History and Appreciation. Four credit hours. Spring Quarter. Four lectures each week. Prerequisite, Music 430. Mr. Hughes, Miss Alexander.

Style, form, and content of compositions of the polyphonic and classical periods.

442. School Music, I. Three credit hours. Autumn Quarter. Three recitations each week. Prerequisite, three Quarters of Sight Singing and Ear Training or its equivalent. Mr. Leeder.

Music in the primary grades. Material and methods of presentation for the supervisor of music. Recitation and practice teaching in the classroom.

443. School Music, II. Three credit hours. Spring Quarter. Three recitations each week. Prerequisite, Music 442. Mr. Leeder.

Continuation of Music 442. Material and methods for the intermediate grades.

447. The Teaching of Elementary School Music. Two credit hours. Autumn Quarter. Five recitations each week. Required in the curriculum for elementary teachers, third and fourth years. No prerequisite. Mr. Leeder.

School music for the elementary teacher or principal. Aims of music education through discussion and study of standard materials to be used under the direction of a supervisor.

448. The Teaching of Elementary School Music. Three credit hours. Spring Quarter. Five recitations each week. Required in the curriculum for elementary teachers, third and fourth years. Prerequisite, Music 447. Mr. Leeder.

Continuation of Music 447.

459. Conducting. Two credit hours. Winter Quarter. Four recitations each week. Prerequisite, Junior standing in Music or permission of the instructor. Mr. Wilson.

A study of the qualities necessary to the successful conductor. Technique of the baton. Practice in conducting choral and instrumental compositions.

This course is not open to students who have credit for Music 365.

460. Harmony. Three credit hours. Autumn Quarter. Three recitations each week. Prerequisite, three Quarters of Sight Singing and Ear Training or its equivalent. Miss Jones.

Review of scales and a thorough drill in the reading and hearing of intervals. Introduction of primary triads, the dominant seventh chord and simple modulations. Keyboard practice.

This course is not open to students who have credit for Music 408 and 409 or 351 and 352.

461. Harmony. Three credit hours. Winter Quarter. Three recitations each week. Prerequisite, Music 460. Miss Jones.

Further practice in simple modulation. Secondary seventh chords. The dominant ninth chord. Modulation to more remote keys.

Continuation of Music 460.

462. Harmony. Three credit hours. Spring Quarter. Three recitations each week. Prerequisite, Music 461. Miss Jones.

Altered chords. Modulation to remote keys. Non-harmonic tones.

Continuation of Music 461.

465. Harmonic Analysis. Three credit hours. Winter Quarter. Three recitations each week. Prerequisite, Music 462. Miss Jones.

Analysis and discussion of chords and non-harmonic tones.

468. Form. Three credit hours. Spring Quarter. Three recitations each week. Prerequisite, Music 462. Miss Jones.

Continuation of the study of form begun in Music 430. More detailed examination into the elements and development of form.

***472. Counterpoint.** Three credit hours. Winter Quarter. Three recitations each week. Prerequisite, Music 462. Miss Jones.

Simple counterpoint in two and three parts.

***474. Counterpoint.** Three credit hours. Spring Quarter. Three recitations each week. Prerequisite, Music 472. Miss Jones.

Four part counterpoint. Florid counterpoint. Combination of species.

Continuation of Music 472.

476. Elementary Sight Singing and Ear Training. Three credit hours. Autumn Quarter. One lecture and five practice periods each week. No prerequisite. Mrs. Wilson.

Elements of notation. Drill in sight singing in major and minor modes. Ear training upon intervals in scale relation, triads, their inversion, and the dominant seventh. Melodic dictation requiring recognition of intervals and simple rhythms.

This course is not open to students who have credit for Music 370 and 371.

478. Elementary Sight Singing and Ear Training. Three credit hours. Winter Quarter. One lecture and five practice periods each week. Prerequisite, Music 476. Mrs. Wilson.

Continuation of Music 476.

479. Elementary Sight Singing and Ear Training. Three credit hours. Spring Quarter. One lecture and five practice periods each week. Prerequisite, Music 478. Miss Alexander.

Continuation of Music 478.

482. Intermediate Sight Singing and Ear Training. Three credit hours. Autumn Quarter. One lecture and four practice periods each week. Prerequisite, Music 479. Mrs. Wilson.

Sight singing of one-, two-, three-, and four-part music. Reading of choruses and selections from operas and oratorios. Melodic dictation including simple modulations. Simple two-, three-, and four-part dictation based on the three primary harmonies.

483. Intermediate Sight Singing and Ear Training. Two credit hours. Winter Quarter. Four practice periods each week. Prerequisite, Music 482. Mrs. Wilson.

Continuation of Music 482.

* Not given in 1928-1929.

485. Advanced Sight Singing and Ear Training. One credit hour. Autumn Quarter. Two practice periods each week. Prerequisite, Music 483. Mrs. Wilson.

Sight reading of difficult choruses, motets, madrigals, etc. Ear training and melodic dictation requiring recognition and reproduction of primary, secondary, and chromatic harmonies.

486. Advanced Sight Singing and Ear Training. One credit hour. Winter Quarter. Two practice periods each week. Prerequisite, Music 485. Mrs. Wilson.

Continuation of Music 485.

501-502-503. Applied Music. Two credit hours. Autumn, Winter, Spring Quarters. Four class lessons each week. Required of all Music students, first year, who have not already advanced in either or both the above named branches to a degree of proficiency found by a faculty committee to be adequate to the needs of music supervision.

Piano and Voice. Applied music as offered in these courses presupposes some previous elementary training, for which college credit cannot be allowed.

504-505-506. Applied Music. One credit hour. Autumn, Winter, Spring Quarters. Two or four class lessons each week. Required of Music students, second year, except those of a satisfactory degree of advancement in these subjects.

Choice of one or two from the following branches: Piano, Voice, Violin. Choice is made according to the recommendation of the Head of the Department and to meet the needs of the student.

507-508-509. Applied Music. One credit hour. Autumn, Winter, Spring Quarters. Two class lessons each week. Required of Music students, third year, except those of a satisfactory degree of advancement in these subjects.

Choice (approved by the Head of the Department) of Piano, Voice, or Violin in the Autumn Quarter. Winter and Spring Quarters instruction in wood-wind instruments. Credit will be given for elementary work in the last named branch.

510-511-512. Applied Music. One credit hour. Autumn, Winter, Spring Quarters. Two class lessons each week. Required of Music students, fourth year, except those of a satisfactory degree of advancement in these subjects.

Brass instruments and instruments of percussion. Credit will be given for elementary instruction.

Music A. University Chorus. No credit. Autumn, Winter, Spring Quarters. One rehearsal each week. Required of Music students, first and second years; Music students, third and fourth years must take Music A or Music B. Mr. Hughes.

The chorus is open to students in any department of the University who are interested in ensemble singing. Each applicant will be given a brief examination to determine whether he is qualified to be admitted to membership in the group.

Music B. University Orchestra. No credit. Autumn, Winter, Spring Quarters. One rehearsal each week. Required of Music students, third and fourth years, who do not enroll in Music A. Mr. Wilson.

The orchestra is open to any student in the University who in an examination before the director can demonstrate a reasonable amount of

proficiency in playing some instrument. Music students, first and second years, who are interested in instrumental music should consult the Head of the Department relative to taking both Music A and Music B.

NOTE: Observation and Participation. To meet the requirement in observation and participation, students should register for Principles of Education 410, 5 hours, in the Spring Quarter of the third year; the work of the course will continue during this Quarter and the Autumn Quarter of the fourth year.

This course will consist in observation and participation in the management of a typical classroom, and in assisting the critic in all phases of school-room problems.

Supervised Teaching. To meet the requirement in supervised teaching, students should register for Principles of Education 440, 5 hours, in the Autumn Quarter of the fourth year; the work of the course will continue during this Quarter and the Spring Quarter of the fourth year.

The course will include student teaching in all grades of the school system; lesson plans for the grade teacher; teacher rating; direct contact with supervisory problems.

FOR ADVANCED UNDERGRADUATES AND GRADUATES

According to the University regulations, courses in this group are not open to Freshmen and Sophomores.

601. The Romanticists. Four credit hours. Autumn Quarter. Four lectures each week. Prerequisite, permission of the instructor. Mr. Hughes.

The music of the romantic period in Germany and France.

602. Wagner and the Music Drama. Three credit hours. Autumn Quarter. Three lectures each week. Prerequisite, permission of the instructor. Mr. Hughes.

Study of the works of Wagner and his contributions to the opera.

603. Modern Music. Four credit hours. Winter Quarter. Four lectures each week. Prerequisite, permission of the instructor. Mr. Hughes.

A brief survey of modern developments with special reference to the composers of France and Russia.

605. History of Choral Music. Three credit hours. Spring Quarter. Three lectures each week. Prerequisite, permission of the instructor. Mr. Hughes.

Choral composers and literature with special consideration of the sixteenth and seventeenth centuries.

This course is not open to students who have credit for Music 305 and 306.

610. Music in the Junior High School. Two credit hours. Autumn Quarter. Two lectures each week. Prerequisites, Music 442 and 443. Mr. Leeder.

Materials, problem discussions, junior high school organizations. A course for supervisors of music or for special music teachers in the junior high school.

611. High School Music. Two credit hours. Spring Quarter. Two lectures each week. Prerequisites, Music 442 and 443. Mr. Leeder.

Materials for musical organizations in the high school. Teaching of the theory of music in the high school. A course for supervisors of music or for special teachers of music in high schools.

***620. Composition.** Three credit hours. Autumn Quarter. Three conferences each week. Prerequisite, permission of the instructor. Miss Jones.

Original composition, beginning with the simple song forms and advancing according to the ability of the class.

***621. Composition.** Three credit hours. Winter Quarter. Two conferences each week. Prerequisite, Music 620. Miss Jones.

Continuation of Music 620.

***622. Composition.** Three credit hours. Spring Quarter. Two conferences each week. Prerequisite, Music 621. Miss Jones.

Continuation of Music 621.

630. Instrumentation. Three credit hours. Autumn Quarter. Three recitations each week. Prerequisite, Music 462, and an amount of applied music satisfactory to the instructor. Mr. Wilson.

Reading, writing, and interpreting orchestral scores with thorough consideration of all the problems involved.

632. Instrumentation. Three credit hours. Winter Quarter. Three recitations each week. Prerequisite, Music 630. Mr. Wilson.

Continuation of Music 630.

635. Instrumentation. Three credit hours. Spring Quarter. Three recitations each week. Prerequisite, Music 632. Mr. Wilson.

Continuation of Music 632.

650. Minor Problems. One to five credit hours. All Quarters. Prerequisite, the consent of the department. All instructors.

Investigation of minor problems in the field of music.

NURSING

(See Public Health)

PHILOSOPHY

Office, 109 University Hall

PROFESSORS LEIGHTON, SABINE, CHANDLER, AND AVEY, MR. SHIMER, MR. DAUGHERTY, MR. LEVINGER, AND DEPARTMENT ASSISTANTS

The courses in philosophy are not open to Freshmen with the exception of 402, which is open to Freshmen who have completed two Quarters' work. Seniors receive full credit for 402.

The courses fall into three groups. Those in the first group (Nos. 401-405) are elementary in character and have no prerequisite. They are designed for students who desire an introduction to philosophy as systematic reflection on the meaning and aims of human civilization.

The courses in the intermediate group (Nos. 601-662) are more advanced and have prerequisites, although these prerequisites are not always in philosophy. These courses are designed for students, whether intending to specialize in literature, the social or natural sciences, or in philosophy itself, who desire a more thorough acquaintance with the

* Not given in 1928-1929.

history of thought and with the fundamental issues of present-day science, religion, and practical life. Courses bearing numbers between 600 and 650 deal with various phases of the history of thought; courses bearing numbers between 650 and 700 are systematic, that is, they undertake to deal with current issues on their merits.

The following courses are relevant to all special interests since they deal with the most general underlying problems: 401, 402, 405, 601, 602, 603, 605, 611, 653, 656, 661.

Courses related to literature and fine arts: 607, 608, 653, 655.

Courses related to mathematics and natural science: 402, 652, 657, 661, 662.

Courses related to social sciences, psychology, and education: 405, 605, 607, 610, 611, 652, 653, 656, 661.

Courses related to commerce and journalism: 405, 605, 606, 656.

Courses related to religion: 405, 605, 606, 607, 608, 609, 610, 611, 653, 656, 661.

Students concentrating in philosophy may be guided by their special interests, but are advised to include 402, 405, 601, 602, 603, 661, and 662 in their programs. Students looking forward to graduate work in philosophy should lay fully as much stress upon securing a sound general cultural and scientific training as upon the special work of this department.

401. Introduction to Philosophy. Five credit hours. One Quarter. Autumn, Winter, Spring. No prerequisite. All instructors.

The meaning and scope of philosophy, its typical problems and theories, its relations to the special sciences and to social life and religion.

402. Elementary Logic. Five credit hours. One Quarter. Autumn, Winter, Spring. No prerequisite. All instructors.

A study of the methods employed in the search for facts, the formulation and testing of general principles, and the application of principles to specific cases. Illustrations are drawn from the processes of common sense, science, history, and law.

405. Elementary Ethics. Five credit hours. One Quarter. Autumn, Winter, Spring. No prerequisite. Mr. Avey, Mr. Shimer, Mr. Daugherty.

An introductory study of the chief theories of the moral life. A natural continuation of this course will be found in Philosophy 605 or 656.

FOR ADVANCED UNDERGRADUATES AND GRADUATES

According to the University regulations, courses in this group are not open to Freshmen and Sophomores.

Courses bearing numbers 601 to 650 are historical; courses bearing numbers 651 to 700 are systematic.

601. Ancient Philosophy. Five credit hours. Autumn Quarter. Mr. Sabine.

The development of philosophical thought from the Greeks to the Middle Ages. Most of the time is devoted to Greek philosophy. A natural continuation of this course will be found in Philosophy 602; a more specialized treatment of medieval philosophy will be found in Philosophy 609.

602. Modern Philosophy. Five credit hours. Winter Quarter. Mr. Sabine.

The development of philosophical thought from the Renaissance to the middle of the nineteenth century. A natural continuation of this course will be found in Philosophy 603.

603. Contemporary Philosophy. Five credit hours. Spring Quarter. Prerequisite, Philosophy 602. Mr. Sabine.

The development of philosophical thought from the middle of the nineteenth century to the present.

***605. The Problem of Human Life.** Five credit hours. Winter Quarter.

A historical and critical consideration of the ideals of human life and ethical principles, both individual and social, contributed to our culture by ancient Greece, Christianity, modern science, and modern humanism. The object of the course is to arrive at a systematic evaluation of the valid factors in an ethical philosophy of life.

606. American Philosophy. Three credit hours. Winter Quarter. Prerequisite, Philosophy 401. Mr. Daugherty.

A survey of the chief philosophical standpoints which have entered into the constitution of the American mind since colonial times; the life and works of the thinkers whose theories are considered.

607. Development of Hebrew Ideas in the Old Testament. Five credit hours. Autumn Quarter. Mr. Avey.

Methods of scholarly study of ancient historical documents are considered, and then applied to the writings of the Old Testament for the purpose of determining their chronological order. On this basis is developed a history of Hebrew ideas, including early tradition; the ideals of the prophets; legal formalism; religious poetry; the Messianic hope.

Not open to students who have credit for Philosophy 407.

***608. Philosophy and Poetry.** Three credit hours. Autumn Quarter. Prerequisite, two courses in Philosophy. Mr. Chandler.

A discussion of Lucretius, Dante's "Divine Comedy", and Goethe's "Faust", for the light they throw on the history of thought and the nature of poetic excellence.

609. Medieval Philosophy. Three credit hours. Winter Quarter. Prerequisite, Philosophy 401, 407, 601, 607, or 610. Mr. Levinger.

The development of philosophical thought from the Church Fathers, through the Arabic, Jewish and scholastic writers, to the Renaissance. A natural continuation of this course will be found in Philosophy 602.

610. Origins of Christian Thought. Three credit hours. Spring Quarter. Prerequisite, Philosophy 401 or 601, or 407 or 408, or 607 or 611. Mr. Avey.

A historical inquiry into the content and meaning of the psychological, ethical, and metaphysical teaching of the New Testament; with an inquiry into the development of Christian thought up to the formation of the Nicene Creed, with especial reference to the influence of Greek philosophy thereon.

611. Origin and Development of Religious Ideas. Five credit hours. Winter Quarter. Mr. Avey.

A general survey of the fundamental ideas of the most important historical religions, including primitive beliefs; Brahmanism; Buddhism; Confucianism; Mohammedanism; Judaism; the various forms of Christianity.

Not open to students who have credit for Philosophy 408.

623. Plato. Three credit hours. Autumn Quarter. Prerequisite, three Quarters in philosophy, including 401 or 601. Mr. Chandler.

Selected dialogues of Plato will be studied in Jowett's translation with reference to their permanent significance for philosophy, literature, and politics.

624. Aristotle and Plotinus. Three credit hours. Winter Quarter. Prerequisite, Philosophy 623. Mr. Chandler.

Selections from the writings of Aristotle and Plotinus will be studied with reference to their permanent significance for philosophy.

* Not given in 1928-1929.

***625. Representative Pre-Kantian Philosophers.** Three credit hours. Autumn Quarter. Prerequisite, Philosophy 602. Mr. Shimer.

A few representative works of classic thinkers of the period from Bacon and Descartes to Kant will be selected for intensive study.

626. Representative Post-Kantian Idealists. Three credit hours. Autumn Quarter. Prerequisite, Philosophy 602. Mr. Shimer.

A few representative works of classic idealists of the period from Kant to Schopenhauer will be selected for intensive study.

***627. Nineteenth Century Empiricists.** Three credit hours. Spring Quarter. Prerequisite, Philosophy 602.

A study of John Stuart Mill and other positivists, and Herbert Spencer and other philosophical evolutionists.

652. Philosophy of Science. Three credit hours. Spring Quarter. Prerequisites, Philosophy 401 or 601, 402, and 602; and three Quarters of college science. Mr. Shimer.

An examination of the fundamental motives, assumptions, and methods of the natural and social sciences, with consideration of their influence on philosophical theories.

653. Philosophy of Religion. Three credit hours. Spring Quarter. Prerequisite, one of the following: Philosophy 401, 405, 601, 602, 607, 610, 611, 656. Students are advised to take 611 as a background for this course. Mr. Leighton.

The psychical and social nature of religion; a comparison of the leading ideas of the Vedanta, Buddhism, Platonism, and Christianity; a systematic examination of the fundamental religious conceptions—the idea of God in relation to the idea of the world, the idea of man, and the problem of human destiny.

655. Esthetics. Five credit hours. Autumn Quarter. Mr. Chandler.

A study of the various fine arts including music and literature, and of the beauty of nature, with the aim of discovering their relation to human nature, their respective limitations, and the value for individual and social life.

Not open to students who have credit for Philosophy 415.

656. Principles of Individual and Social Ethics. Five credit hours. Spring Quarter. Prerequisite, one of the following. Philosophy 401, 405, 601, 602, 607, 611, Psychology 401-402, or Sociology 401-402. Mr. Leighton.

Systematic development of a philosophy of human values, and its application to the chief forms and activities of civilized life—industrial and economic activities, the state, education, culture, and religion. Emphasis is laid on the social function of education as being the most important instrument of individual welfare and social progress.

This course is not open to students who have credit for Philosophy 406.

657. Mathematical Logic. Three credit hours. Autumn Quarter. Prerequisite, Philosophy 402 or six Quarters of college mathematics. Mr. Avey.

The algebra of logic; relations, postulates, and deductive systems; the relation of mathematical logic to other types of logic, and its philosophical implications.

661. Metaphysics of Knowledge and Nature. Three credit hours. Autumn Quarter. Prerequisites, two of the following, with a standing of "B" or higher; Philosophy 401, 402, 601, 602, 603, or the consent of the instructor. Mr. Leighton.

A systematic consideration of the nature of scientific method and the scientific conception of nature in its bearings on the problems of man.

* Not given in 1928-1929.

662. Metaphysics of Personality and Values. Three credit hours. Winter Quarter. Prerequisites, two of the following, with a standing of "B" or higher; Philosophy 401, 402, 601, 602, 603, or the consent of the instructor. Mr. Leighton.

A systematic consideration of the nature of the self and society, the problem of values, and the problem of the meaning of existence as a whole.

FOR GRADUATES

An undergraduate student shall not be permitted to take any course in the "800" group except by permission of the Graduate Council.

801. Seminary in Systematic Philosophy.

802. Seminary in Systematic Philosophy.

803. Seminary in Systematic Philosophy.

805. Scientific Method.

806. Epochs in the History of Thought.

809-810-811. Research.

***815-816-817. Seminary in Social and Political Philosophy.**

***820. Philosophy of History.**

For description of graduate courses in this department see the Bulletin of the Graduate School.

PHYSICAL EDUCATION

MEN

Office, The Gymnasium

PROFESSORS ST. JOHN, WILCE, CASTLEMAN, AND NICHOLS, ASSISTANT PROFESSORS TRAUTMAN, COBB, AND OLSEN, MR. DUFFEE, MR. MOONEY, MR. STALEY, MR. HINDMAN, MR. WILLAMAN, MR. WOOD

Students in the College of Education may major in physical education. This course prepares for all types of positions of leadership in the field of physical education, athletic coaching, recreation, and health supervision.

Students in the College of Education may take courses in physical education as a minor not to exceed thirty Quarter-credit hours, in addition to the required courses, 400, 401, 402, 403, on the approval of the Head of the Department of Physical Education and the Dean of the College of Education.

Juniors and Seniors not taking physical education as a minor, may elect one or more courses in addition to the courses required of all students. Such students may not elect in the aggregate more than nine Quarter-credit hours. In each case the approval of the Head of the Department and of the Dean of the College of Education is necessary. Students in the Colleges of Agriculture, Liberal Arts, Commerce and Administration, and Engineering wishing to take these courses must secure permission of the Deans of their respective Colleges and of the Head of the Department of Physical Education.

All students who major or minor in physical education must consult with Mr. Hindman of the department, each Quarter before handing in their schedules.

400. Hygiene. One credit hour. One Quarter. Autumn, Winter, Spring. One lecture each week. Required of every Freshman during one of his first three Quarters of residence in the University. Mr. Castleman, Mr. Nichols, Mr. Wilce, Mr. Duffee.

This course deals with the various factors and conditions which affect the health and efficiency of the student.

* Not given in 1928-1929.

401. Physical Education. One credit hour. Autumn Quarter. Two hours each week. Required of every Freshman. All instructors.

The work in this course is based on a thorough physical examination and motor efficiency tests, given at the beginning of the entering Quarter, for the purpose of classifying the students into similar ability groups.

The course includes general body-building exercises, gymnastic and athletic games, and antagonistic sports, with advanced elective activities for the physically superior groups.

402. Physical Education. One credit hour. Winter Quarter. Two hours each week. Required of every Freshman. All instructors.

A continuation of Physical Education 401.

403. Physical Education. One credit hour. Spring Quarter. Two hours each week. Required of every Freshman. All instructors.

A continuation of Physical Education 402.

NOTE: The following courses in physical education are open to students in the College of Education as a major or minor. Students in the Colleges of Agriculture, Liberal Arts, Commerce and Administration, and Engineering wishing to take these courses must secure permission of the Deans of their respective Colleges and of the Head of the Department of Physical Education.

441. Theory and Practice of Physical Education (Men). Two credit hours. Autumn Quarter. One lecture and three laboratory periods each week. Physical Education, second year. Mr. Hindman.

A consideration by discussion and readings of the mental and physical growth and development during early and later childhood. The purpose will be to acquaint the student with the interests and tendencies which occur during the various age periods and prepare him for the adaptation of physical activities to the individual. Practice and instruction in methods of teaching volley ball, playground ball, soccer, speed-ball, cage-ball, hand-ball, squash and tennis.

442. Theory and Practice of Physical Education (Men). Two credit hours. Winter Quarter. One lecture and three laboratory periods each week. Physical Education, second year. Prerequisite, Physical Education 441. Mr. Hindman, Mr. Mooney, Mr. Staley.

A continuation of the study of growth and development during early and later adolescence, and a consideration of the function of play and recreation and the organization of play activities in the school curriculum and on the playground. Practice and instruction in methods of teaching personal combat activities, boxing, wrestling and fencing.

443. Theory and Practice of Physical Education (Men). Two credit hours. Spring Quarter. One lecture and three laboratory periods each week. Physical Education, second year. Mr. Castleman.

Study and practice in the theory, method, and mechanics of coaching track and field events.

NOTE: Physical Education 441-442-443 form a unit of work which is required in the curriculum in Physical Education and may be elected by other students in the College of Education.

445. Theory and Practice of Physical Education (Men). Three credit hours. Autumn Quarter. Two lectures and three laboratory periods each week. Physical Education, third year. Mr. Cobb.

A consideration of the more formalized types of activities and their application in elementary and secondary schools and colleges. Practice and instruction in methods of teaching, marching tactics, postural exercises, calisthenics, gymnastic drills, heavy and light apparatus, and mat work.

446. Theory and Practice of Physical Education (Men). Three credit hours. Winter Quarter. Two lectures and three laboratory periods each week. Physical Education, third year. Mr. Wilce, Mr. Wilaman, Mr. Oberlander.

Study and practice in the strategy and mechanics of directing football, including a consideration of football rules, football fundamentals, individual and team play, offensive and defensive formations, organization and practice periods and educational values of sports.

447. Theory and Practice of Physical Education (Men). Three credit hours. Spring Quarter. Two lectures and three laboratory periods each week. Physical Education, third year. Mr. St. John, Mr. Trautman.

Study and practice in the theory, strategy, and mechanics of coaching baseball, including batting, base-running, and the playing of all positions.

NOTE: Physical Education 445-446-447 form a unit of work which is required in the curriculum in Physical Education and may be elected by other students in the College of Education.

449. Theory and Practice of Physical Education (Men). Three credit hours. Autumn Quarter. Two lectures and three laboratory periods each week. Physical Education, fourth year. Mr. Olsen.

Study and practice in the theory, strategy, and mechanics of directing basketball, including various systems of offense and defense and team play, passing, goal throwing, dribbling, pivoting, organization of practice periods, judgment and psychology in handling of men.

450. Theory and Practice of Physical Education (Men). Three credit hours. Winter Quarter. Two lectures and three laboratory periods each week. Physical Education, fourth year. Mr. Staley, Mr. Wood.

A consideration of methods of progression, nomenclature and the organization of programs in physical education. A consideration of intramural activities and their place in the school program. Practice in light and heavy apparatus work, tumbling, athletic and folk dancing.

451. Theory and Practice of Physical Education (Men). Three credit hours. Spring Quarter. Two lectures and three laboratory periods each week. Physical Education, fourth year. Prerequisites, Physical Education 441-442-443, 445-446-447 and 449-450. Mr. St. John, Mr. Wilce, Mr. Nichols, Mr. Cobb.

Review of technique and methods in coaching the major sports together with a consideration of tennis, golf, summer camp and boy-scout activities.

NOTE: Physical Education 449-450-451 form a unit of work which is required in the curriculum in Physical Education and may be elected by other students in the College of Education.

†452. Theory and Practice of Physical Education for High School. Three credit hours. Four lectures and four laboratory periods each week. Mr. Hindman.

A consideration of the various types of physical education programs including practice and instruction in methods of teaching games, marching tactics, developmental exercises, light apparatus, athletic dancing, etc.

†473. First Aid. One credit hour. Two lectures each week. Mr. Duffee.

Principles and methods of first aid, emphasizing conditions arising in connection

† Not given during the academic year, 1928-1929.

with physical education. The satisfactory completion of this course carries with it a Red Cross certificate.

† 480. **Organization and Administration of Athletics and Physical Education for Boys.** Two credit hours. Four lectures each week. Mr. Trautman.

A consideration of problems of organization and administration of physical education including competitive athletics.

Not open to students who have credit for Physical Education 481.

† 482. **Play and Playground.** Two or three credit hours. Four lectures and four laboratory periods each week.

Lectures on play theory, recreation, plays and games, and other playground activities, including supervision and practice teaching on the University playground. Emphasis will be placed on the organization of games for the school playground.

493. **Therapeutic Gymnastics and Physical Examinations.** Three credit hours. Spring Quarter. Two lectures and three laboratory periods each week. Physical Education, third year. Prerequisites, Anatomy 412 and Physiology 407-408. Mr. Duffee.

Lectures, recitations, and practice, dealing with the theory and mechanics of postural defects, with practice in giving exercises suitable for each condition. Exercise for remedial work will enable the student to carry out the prescription of a physician. The course includes a discussion of the physical examination and methods used in normal diagnosis.

† 501. **Principles of Coaching Football.** Two credit hours. Two lectures and four laboratory hours each week. Mr. St. John, Mr. Olsen.

A consideration of football rules, football fundamentals, individual and team play, offensive and defensive formations, pedagogy, and methods of coaching.

* 502. **Advanced Football Technique.** One credit hour. Two lectures each week. Prerequisite, Physical Education 501, and permission of instructor. Mr. St. John, Mr. Trautman.

Lectures and reports. Consideration of plays, methods, generalship, and special problems.

† 504. **Principles of Coaching Basketball.** One credit hour. Two lectures and two laboratory hours each week. A knowledge of the rules of basketball is prerequisite. Mr. Olsen.

A study of individual and team play, offensive and defensive practice methods.

† 508. **Principles of Coaching Track and Field Sports.** One credit hour. Two lectures and two laboratory hours each week. Mr. Olsen, Mr. Griffith.

Instruction and practical demonstration in the usual track and field events.

† 512. **Principles of Coaching Baseball.** One credit hour. Two lectures and two laboratory hours each week. A knowledge of baseball rules is considered prerequisite. Mr. Trautman.

A study of batting, base running, playing all positions, methods of coaching, a full treatment of fundamentals.

ELECTIVE COURSES FOR MEN DISQUALIFIED FOR MILITARY SCIENCE

525. **Physical Education.** One credit hour. Autumn Quarter. Three hours each week. Open to Freshmen disqualified for elementary courses in Military Science. All instructors.

This course is similar in content to Physical Education 401.

* Not given in 1928-1929.

† Not given during the academic year, 1928-1929.

526. Physical Education. One credit hour. Winter Quarter. Three hours each week. Open to Freshmen disqualified for elementary courses in Military Science. All instructors.

This course is similar in content to Physical Education 402.

527. Physical Education. One credit hour. Spring Quarter. Three hours each week. Open to Freshmen disqualified for elementary courses in Military Science. All instructors.

This course is similar in content to Physical Education 403.

528. Physical Education. One credit hour. Autumn Quarter. Three hours each week. Open to Sophomores disqualified for elementary courses in Military Science. All instructors.

This course offers advanced training and instruction in various athletic sports.

529. Physical Education. One credit hour. Winter Quarter. Three hours each week. Open to Sophomores disqualified for elementary courses in Military Science. All instructors.

This course offers advanced training and instruction in various athletic sports.

530. Physical Education. One credit hour. Spring Quarter. Three hours each week. Open to Sophomores disqualified for elementary courses in Military Science. All instructors.

This course offers advanced training and instruction in various athletic sports.

FOR ADVANCED UNDERGRADUATES AND GRADUATES

According to the University regulations, courses in this group are not open to Freshmen and Sophomores.

643. The Teaching of Health. Three credit hours. Spring Quarter. Lectures and discussions. Prerequisite, Physical Education 692. Miss Armstrong.

Consideration of place and value of health instruction in elementary and secondary schools, together with evaluation of subject matter and methods. This course may be counted toward the professional requirement in the College of Education.

651. Minor Problems in Physical Education. One to four credit hours. Autumn, Winter, Spring Quarters. Prerequisite, twenty-five hours in physical education. Before registering, students must secure permission of the instructor. Mr. Nichols.

Investigation of minor problems in the fields of physical and health education.

682. Organization and Administration of Physical Education. Five credit hours. Winter Quarter. Five lectures each week. Physical Education, fourth year. Prerequisite, Physiology 407-408, and Physical Education 683. Open to Seniors and graduate students. Mr. St. John, Mrs. Lydia Clark Benedict, Mr. Trautman.

A consideration of the problems of organization for physical education in elementary and secondary schools and colleges, including standards and methods in administration of interscholastic, intercollegiate, and intramural athletics. The first eight lectures will deal with problems common to both men's and women's work. Thereafter, the women's classes will be conducted separately, with emphasis on problems peculiar to this field. The personnel of a department, athletic and gymnastic facilities, and construction, purchase and care of equipment, keeping of records and reports, handling of finances, schedule making, publicity, insignia and awards, managerial systems, scholastic and athletic eligibility, and professionalism will be included in the problems discussed.

683. History and Principles of Physical Education. Five credit hours. Winter Quarter. Five lectures each week. Physical Education, third year. Prerequisites, Physiology 407-408, or 401-402, and Psychology 401. Mr. Wilce.

A historical survey of physical education beginning with that of ancient Greece and including contemporary developments and a consideration of the biological and educational aspects of physical education, with special reference to its place in education.

This course is not open to students who have credit for Physical Education 681.

685. Prevention and Care of Injuries. Three credit hours. Autumn Quarter. Three lectures each week. Physical Education, fourth year. Prerequisites, Physiology 407-408, or 401-402, and Public Health 601 or their equivalent. Mr. Duffee.

A consideration of the methods of prevention and care of injuries occurring in physical education and competitive sports. The course also includes a discussion of the conditioning of men for athletic contests.

691. Kinesiology. Three credit hours. Autumn Quarter. Three lectures each week. Physical Education, third year. Prerequisites, Anatomy 412 and Physiology 407-408. Mr. Duffee.

Lectures and recitations dealing with the anatomical mechanism of movements. The purpose of the course is to acquaint the student with means of analyzing movements intelligently and prescribing programs of gymnastics, sports, and dancing for developmental or corrective purposes.

692. Hygiene and School Health Problems. Three credit hours. Winter Quarter. Three lectures each week. Physical Education, fourth year. Prerequisites, Chemistry 401-402 or 411-412 and Physiology 407-408. Open to Seniors and graduate students. Mr. Nichols.

A consideration of the problems in connection with the health of the school child and teacher. Discussions and reports relating to medical inspection, physical examinations, symptoms and control of common school diseases, malnutrition, and the health environment of the school child.

NOTE: For course in the Physiology of Exercise see the Department of Physiology, Course 620.

WOMEN

Office, Pomerene Hall

PROFESSORS BENEDICT AND ARMSTRONG, ASSISTANT PROFESSORS PALMER AND HERSBY, MISS SUMPTION, MISS GILMAN, MISS KIMM, MISS ALWAY, MISS SEHON, MISS SCHLEMAN, MISS HALL

Students in the College of Education may take courses in physical education as a minor not to exceed thirty Quarter-credit hours, in addition to the required courses, 400, 421, 422, 423, 425, 426, 427, on the approval of the Head of the Department of Physical Education and the Dean of the College of Education.

Juniors and Seniors not taking physical education as a minor, may elect one or more courses in addition to the courses required of all students. Such students may not elect in the aggregate more than nine Quarter-credit hours. The approval of the Head of the Department and the Dean of the College of Education is necessary.

400. Hygiene. One credit hour. One Quarter. Autumn, Winter, Spring. One lecture each week. Required of every Freshman during one of her first three Quarters of residence in the University. Miss Armstrong.

This course deals with the various factors and conditions which affect the health and efficiency of the student.

421. Physical Education. One credit hour. Autumn Quarter. Two hours each week. Required of every Freshman. All instructors.

The work includes outdoor sports—hockey, soccer, tennis, archery, swimming. Interpretative dancing and corrective gymnastics.

422. Physical Education. One credit hour. Winter Quarter. Two hours each week. Required of every Freshman. All instructors.

This work includes indoor baseball, basketball, gymnastics, interpretative dancing, swimming, and corrective work.

423. Physical Education. One credit hour. Spring Quarter. Two hours each week. Required of every Freshman. All instructors.

This work includes baseball, tennis, field and track, archery, swimming, and interpretative dancing.

425. Physical Education. One credit hour. Autumn Quarter. Three hours each week. Required of all Sophomores. All instructors.

A continuation of Physical Education 421, 422, and 423.

426. Physical Education. One credit hour. Winter Quarter. Three hours each week. Required of all Sophomores. All instructors.

A continuation of Physical Education 425.

427. Physical Education. One credit hour. Spring Quarter. Three hours each week. Required of all Sophomores. All instructors.

A continuation of Physical Education 426.

NOTE: Students planning to major in Physical Education should consult the Director of Physical Education for Women regarding selection of activities offered in Physical Education 421, 422, 423, 425, 426, and 427.

NOTE: The following courses in Physical Education are open to students in the College of Education. Students in the Colleges of Agriculture, Liberal Arts, Commerce and Administration, and Engineering wishing to take these courses must secure permission of the Deans of their respective Colleges and of the Head of the Department of Physical Education.

† **460. Folk Dancing.** Two credit hours. One lecture and four laboratory periods each week. Mrs. Lydia Clark Benedict.

Practice in rhythm and folk dancing for the elementary and the junior high school. During the class period there will be short talks and discussions on methods of teaching folk dancing.

This course is not open to students who have credit for Physical Education 461.

† **464. Elementary Interpretative Dancing.** One credit hour. Four laboratory hours each week. Mrs. Lydia Clark Benedict.

Practice in elementary developmental exercises for the purpose of establishing correct habits of balance and muscular control. Discussion of the relation of music to the dance. Practice in creating simple dance themes.

† **471. Sports Technique.** Two credit hours. One lecture and four one-hour laboratory periods each week. Miss Palmer.

An elementary course in the strategy and technique of basketball, baseball, and volley ball.

† **473. First Aid.** One credit hour. Two lectures each week. Mr. Duffee.

Principles and methods of first aid, emphasizing conditions arising in connection with physical education. A satisfactory completion of this course carries with it a Red Cross certificate.

† Not given during the academic year 1928-1929.

†475. **Principles of Physical Education.** Two credit hours. Four lectures each week. Mrs. Lydia Clark Benedict.

A consideration of the objectives of physical education, adaptation of physical activities to age periods, and methods of conducting activities in the elementary and secondary schools.

†482. **Play and Playground.** Three credit hours. Three lectures and three laboratory periods each week. Prerequisite, Psychology 407 or its equivalent. This course should be taken in connection with 485, Plays and Games. Miss Hersey.

Lectures on the meaning of play, characteristics of different age periods. Classification and organization of play activities suitable for each age period. Visits will be made to the city playgrounds.

†485. **Plays and Games.** One credit hour. Five laboratory periods. Miss Hersey.

Indoor and outdoor games for the elementary and junior high schools. They range in difficulty from the simple games suitable for first grade children to the more highly organized games such as Captain ball, Newcomb and Deck Tennis.

†492. **Gymnastics.** Two credit hours. Two lectures and four laboratory hours each week. Miss Hersey.

Includes simple marching, free standing developmental exercises, jumping and vaulting suitable for elementary and junior high school children. Discussion of methods of teaching and practice in conducting class activity.

Not open to students who have credit for Physical Education 490 and 491.

493. **Therapeutic Gymnastics and Physical Examinations.** Three credit hours. Spring Quarter. Two lectures and three laboratory periods each week. Physical Education, third year. Prerequisites, Anatomy 412 and Physiology 407-408. Miss Gilman.

Lectures, recitations, and practice, dealing with the theory and mechanics of postural defects, with practice in giving exercises suitable for each condition. Exercise for remedial work will enable the student to carry out the prescription of a physician. The course includes a discussion of the physical examination and methods used in diagnosis of physical defects.

†495. **Elementary and Intermediate Swimming.** One credit hour. Four laboratory hours each week.

Instruction and practice in swimming for those wishing to learn to swim.

†496. **Advanced Swimming.** One credit hour. Four laboratory hours each week.

Instruction and practice for advanced swimmers.

†514. **Tennis.** One credit hour. Four laboratory hours each week. Miss Palmer.

Practice in the correct form in playing tennis. Advanced technique for those who play the game correctly.

This course may be substituted for one hour of the Freshman physical education requirement.

541. **Theory and Practice of Physical Education (Women).** Three credit hours. Autumn Quarter. Two lectures and four laboratory periods each week. Physical Education, second year. Mrs. Lydia Clark Benedict, Miss Hersey.

Lectures, discussions, and readings on the mental and physical growth and development during early and later childhood. The purpose of the course will be to acquaint

{ Not given during the academic year, 1928-1929.

the student with the interests and tendencies which occur during the various age periods and in a measure prepare him for adaptation of physical activities to the individual. Practice in the development of the fundamental muscles by movements based on natural coordinations. Plays and games of simple organization will be given together with discussions concerning the place of games in the school curriculum.

542. Theory and Practice of Physical Education (Women). Three credit hours. Winter Quarter. One lecture and six laboratory hours each week. Physical Education, second year. Prerequisite, Physical Education 541. Mrs. Lydia Clark Benedict, Miss Hersey, Miss Sehon.

A study of the mental and physical growth during early and late adolescence. Practice in elementary rhythmic expression which will include a study of the simple elements of music. Practice will be given in the development of fundamental movements which will permit a controlled dynamic response of the body to music. Formal gymnastics which will include marching, elementary free-standing gymnastics, and apparatus work on booms, ladders, ropes, vaulting box, horse and buck. Games for upper grades and high school will be given.

543. Theory and Practice of Physical Education (Women). Three credit hours. Spring Quarter. Two lectures and four laboratory periods each week. Physical Education, second year. Prerequisites, Physical Education 541-542. Mrs. Lydia Clark Benedict, Miss Hersey.

A consideration of the adaptation of physical activities to the individual at different age periods with emphasis placed on the type of activity which will make for better adjustment of the individual to a modern environment. Practice will be given in interpretative dancing and elementary folk dancing which is suitable for the elementary school. Opportunity will be given for practice teaching. Discussion will be given on the national characteristics of these dances and the correlation of this work with the course of study in the public schools.

NOTE: Physical Education 541-542-543 form a unit of work which is required in the curriculum in Physical Education and may be elected by other students in the College of Education.

545. Theory and Practice of Physical Education (Women). Three credit hours. Autumn Quarter. Two lectures and four laboratory periods each week. Physical Education, third year. Prerequisites, Physical Education 541-542-543. Miss Hersey, Miss Sumption.

A consideration of the methods of teaching hockey and Danish gymnastics. Discussions of methods of play, plans for development of advanced technique and organization of the season's work. Practice will be given in teaching college groups under supervision. Opportunity will be given for the election of these sports during the season's work.

546. Theory and Practice of Physical Education (Women). Three credit hours. Winter Quarter. Two lectures and four laboratory periods each week. Physical Education, third year. Prerequisites, Physical Education 541-542-543 and 545. Miss Palmer, Miss Hersey.

A consideration of the methods of teaching basketball, which includes discussions of methods of play, plans for development of advanced technique and organization of the season's work. A survey of gymnastic material followed by discussions of methods of teaching. Practice in the organization of lesson plans. Opportunity will be given for practice in teaching groups of college students under careful supervision. Practice in free-standing gymnastics of a medium degree of difficulty. Attention will be given to the selection of gymnastic material which is adapted to elementary and secondary schools.

547. Theory and Practice of Physical Education (Women). Three credit hours. Spring Quarter. Two lectures and four laboratory periods

each week. Physical Education, third year. Prerequisites, Physical Education 541-542-543 and 545-546. Miss Palmer, Miss Sumption.

Discussion of the methods of teaching field and track and baseball. Time will be spent in study of the rules of play, methods of developing skill and organization of the season's work. Practice in coaching college groups under careful supervision. Opportunity will be offered to elect these sports during the season.

NOTE: Physical Education 545-546-547 form a unit of work which is required in the curriculum in Physical Education and may be elected by other students in the College of Education.

549. Theory and Practice of Physical Education (Women). Three credit hours. Autumn Quarter. Two lectures and four laboratory periods each week. Physical Education, fourth year. Prerequisites, Physical Education 541-542-543 and 545-546-547. Miss Sumption, Miss Saum.

A consideration of the methods of teaching swimming and soccer. Practice will be given in advanced gymnastics and opportunity for work which may be used by college women, and in addition gymnastics which may be used for the Y. W. C. A. and community centers.

550. Theory and Practice of Physical Education (Women). Three credit hours. Winter Quarter. Two lectures and four laboratory periods each week. Physical Education, fourth year. Prerequisites, Physical Education 541-542-543, 545-546-547, and 549. Miss Sehon.

Lectures, discussions and readings dealing with the philosophy of the dance. The relation of the dance to the drama and the organization of dancing in festivals and pageants. Attention will be given to the selection of music, line and color. Practice in advanced work in rhythmic expression and advanced folk dancing. Attention will be given to the adaptation of this work to secondary schools and colleges. Opportunity will be given for practice in advanced gymnastics.

551. Theory and Practice of Physical Education (Women). Three credit hours. Spring Quarter. Two lectures and four laboratory periods each week. Physical Education, fourth year. Prerequisites, Physical Education 541-542-543, 545-546-547, and 549-550. Miss Palmer, Miss Hersey, Miss Schleman.

A consideration of the administration of the school playground. Discussions of organization of community recreation and scouting groups. Time will be spent in observation and practice work with groups of children. Discussions will be given on the technique of tennis and archery as well as methods of teaching the sports.

NOTE: Physical Education 549-550-551 form a unit of work which is required in the curriculum in Physical Education and may be elected by other students in the College of Education.

FOR ADVANCED UNDERGRADUATES AND GRADUATES

According to the University regulations, courses in this group are not open to Freshmen and Sophomores.

643. The Teaching of Health. Three credit hours. Spring Quarter. Lectures and discussions. Prerequisite, Physical Education 692. Miss Armstrong.

Consideration of place and value of health instruction in elementary and secondary schools, together with evaluation of subject matter and methods. This course may be counted toward the professional requirement in the College of Education.

651. Minor Problems in Physical Education. One to four credit hours. Autumn, Winter, Spring Quarters. Prerequisite, twenty-five

hours in physical education. Before registering, students must secure permission of the instructor. Mrs. Lydia Clark Benedict.

Investigation of minor problems in the field of physical and health education.

671. Therapeutic Gymnastics, Advanced (Women). Three credit hours. Autumn Quarter. Two lectures and three laboratory periods each week. Physical Education, fourth year. Prerequisites, Anatomy 412, Physiology 407-408, and Physical Education 493. Miss Armstrong, Miss Gilman.

Lectures and discussions of therapeutic gymnastics in elementary and secondary schools and colleges. Opportunity will be given for observation and practice in college groups and clinics. Practice will be given in first aid and massage.

682. Organization and Administration of Physical Education. Five credit hours. Winter Quarter. Five lectures each week. Physical Education, fourth year. Prerequisites, Physiology 407-408, and Physical Education 683. Open to Seniors and graduate students. Mr. St. John, Mrs. Lydia Clark Benedict, Mr. Trautman.

A consideration of the problems of organization for physical education in elementary and secondary schools and colleges, including standards and methods in administration of interscholastic, intercollegiate, and intramural athletics. The first eight lectures will deal with problems common to both men's and women's work. Thereafter, the women's classes will be conducted separately, with emphasis on problems peculiar to this field. The personnel of a department, athletic and gymnastic facilities, and construction, purchase and care of equipment, keeping of records and reports, handling of finances, schedule making, publicity, insignia and awards, managerial systems, scholastic and athletic eligibility, and professionalism, will be included in the problems discussed.

683. History and Principles of Physical Education. Five credit hours. Winter Quarter. Five lectures each week. Physical Education, third year. Prerequisites, Physiology 407-408, and Psychology 401. Mr. Wilce.

A historical survey of physical education beginning with that of ancient Greece and including contemporary developments and a consideration of the biological and educational aspects of physical education, with special reference to its place in education.

This course is not open to students who have credit for Physical Education 681.

691. Kinesiology. Three credit hours. Autumn Quarter. Two lectures and three laboratory periods each week. Physical Education, third year. Prerequisites, Anatomy 412 and Physiology 407-408. Miss Sumpston.

Lectures and recitations dealing with the anatomical mechanism of movements. The purpose of the course is to acquaint the student with means of analyzing movements intelligently and prescribing programs of gymnastics, sports, and dancing for developmental or corrective purposes.

692. Hygiene and School Health Problems. Three credit hours. Winter Quarter. Three lectures each week. Physical Education, fourth year. Prerequisites, Chemistry 401-402 or 411-412 and Physiology 407-408. Open to Seniors and graduate students. Mr. Nichols.

A consideration of the problems in connection with the health of the school child and teacher. Discussions and reports relating to medical inspection, physical examinations, symptoms and control of common school diseases, malnutrition, and the health environment of the school child.

NOTE: For course in the Physiology of Exercise, see the Department of Physiology, Course 620.

PHYSICS

Office, 107 Mendenhall Laboratory

PROFESSORS ALPHEUS W. SMITH, COLE, EARHART, AND BLAKE, ASSISTANT
PROFESSORS HEIL AND ALVA W. SMITH, MR. SAPPENFIELD, MR.
ZUMSTEIN, MR. GREEN AND DEPARTMENT ASSISTANTS

401. General Physics: Mechanics and Heat. Five credit hours. One Quarter. Autumn and Spring. Four lectures and recitations and one two-hour laboratory period each week. Prerequisite, two units of high school mathematics. Mr. Sappenfield, Mr. Green.

An introductory course in general physics.

This course is not open to students who have entrance credit for physics.

402. General Physics: Sound, Light, Electricity. Five credit hours. Winter Quarter. Four lectures and recitations and one two-hour laboratory period each week. Prerequisite, Physics 401. Mr. Sappenfield, Mr. Green.

An elementary course in general physics.

This course is not open to students who have entrance credit for physics.

403. General Physics: Mechanics and Heat. Five credit hours. Autumn Quarter. Four lectures and recitations and one two-hour laboratory period each week. Prerequisites, two entrance units in mathematics, one entrance unit in physics, and knowledge of plane trigonometry. Mr. Earhart, Mr. Blake.

A course in general physics for students who have had physics in high school.

404. General Physics: Sound, Light, Electricity. Five credit hours. Winter Quarter. Four lectures and recitations and one two-hour laboratory period each week. Prerequisite, Physics 403. Mr. Earhart, Mr. Blake.

A course in general physics for students who have had physics in high school.

FOR ADVANCED UNDERGRADUATES AND GRADUATES

According to the University regulations, courses in this group are not open to Freshmen and Sophomores.

607. Advanced Light. Four credit hours. Spring Quarter. Three lectures and recitations and one two-hour laboratory period each week. Prerequisites, Mathematics 441-442-443 and three Quarters of college physics. Mr. Cole.

Lenses, systems of lenses, cardinal points, defects of images and their correction, optical instruments, spectroscopy, plane gratings, concave gratings, the ultra-violet, the infra-red, diffraction, interference, interferometers, photometry, spectrophotometer, polarization, optical rotation, displacement currents, Hertzian waves, dispersion theory, anomalous dispersion, rest-strahlen, X-rays and their spectra, K and L series, Quantum theory, Zeeman and Stark effects, atom models, Bohr theory.

608. Advanced Electricity. Four credit hours. Winter Quarter. Four lectures and recitations each week. Prerequisites, Mathematics 441-442-443 and three Quarters of college physics. Mr. Earhart.

An introductory course in the mathematical theory of electricity and magnetism.

609. Molecular Physics and Heat. Four credit hours. Autumn Quarter. Four lectures and recitations each week. Prerequisites, Mathematics 441-442-443 and three Quarters of college physics. Mr. Earhart.

A study of the kinetic theory of gases, capillarity, osmosis, and related topics.

610. Conduction of Electricity through Gases and Radioactivity. Four credit hours. Winter Quarter. Four lectures and recitations each week. Prerequisites, Mathematics 441-442-443 and three Quarters of college physics. Mr. Heil.

An introductory course on the passage of electricity through gases and evacuated tubes, ionic velocities, photo-electricity, determination of the elementary charge, discharge of electricity from incandescent solids, radioactive properties of matter, etc.

616. Advanced Physical Laboratory. Three to twenty-four credit hours. Any Quarter. Two three-hour laboratory periods each week. Prerequisites, one year of college physics. Mr. Heil, Mr. Alva Smith.

This course is intended to give the advanced student in science practice in precise physical measurements, involving the use of high grade mechanical, optical, electrical and thermal instruments.

The work undertaken will be elected from the following topics:

(a) *Mechanics and Heat.* Exact measurements involving determinations of elasticities of solids, moments of inertia, torsional rigidity, torsional hysteresis "g" by physical pendulum, coefficients of viscosity, density of gases and vapors, hygrometry, specific heats, heat values of gases, thermo-electromotive forces, etc.

(b) *Advanced Optical Measurements.* Exact determinations of indices of refraction by means of spectrometers, wavelengths by means of ruled gratings and interferometers, dispersion, polarization, absorption, analysis of spectra, etc.

(c) *Advanced Electrical Measurements.* Exact measurements of currents, resistances, electromotive forces, magnetic permeability, capacity and inductance; transient phenomena involving the determination of time constants of circuits; fundamental alternating current measurements; the use of the oscillograph in the study of alternating and transient currents.

(4) *Advanced Measurements in Ionization and Radioactivity.* Use of electrometers and electroscopes for exact measurement of currents in gases, saturation currents, discharge electricity and ionizing properties of radioactive materials, absorption of radiation; ionizing properties of flames and incandescent solids; characteristic curves of two and three electrode tubes and application, photo-electricity, etc.

Any one of the above topics may be selected during the Quarter with the exception of topic (d) which is offered only during the Winter Quarter.

A student may repeat this course until he has obtained a maximum of twenty-four credit hours. Only three credit hours may be taken during any Quarter except during the Summer Quarter, when six credit hours may be obtained. A student may accumulate not more than six credit hours in any one of the above topics.

630. Minor Investigations. Three to five credit hours, for one or two Quarters. Autumn, Winter, Spring. Prerequisites, nine Quarter-credit hours of Physics 616, or equivalent; and two of the following theoretical courses: Physics 607, 608, 609, 610, 611 or equivalent. Mr. Cole, Mr. Earhart, Mr. Blake, Mr. Alpheus Smith, Mr. Heil, Mr. Alva Smith.

After consulting the instructor in charge, the student may select for investigation a subject in radiation, including X-rays, radioactivity, conduction of electricity through gases, radio communication, electricity and magnetism. Opportunity is also offered to repeat certain classical experiments in physics.

NOTE: TEACHING COURSES. For the Teaching Course in this department see the Department of Principles of Education, Course 755.

FOR GRADUATES

An undergraduate student shall not be permitted to take any course in the "800" group except by permission of the Graduate Council.

- 801. Advanced Theory of Light.
- 802. Advanced Theory of Light.
- *803. Thermo-dynamics.
- *804. Thermo-dynamics.
- 805. Theory of Electricity and Magnetism.
- 806. Theory of Electricity and Magnetism.
- 807. Theory of Electricity and Magnetism.
- 809. Theory of Oscillations.
- 810. Theory of Oscillations.
- 811. Theory of Oscillations.
- 812. Seminary in Physics.
- *813. Electronic Theory and Atomic and Molecular Structure.
- *814. Electronic Theory and Atomic and Molecular Structure.
- *815. Electronic Theory and Atomic and Molecular Structure.
- *817. Theoretical and Quantum Mechanics.
- *818. Theoretical and Quantum Mechanics.
- *819. Theoretical and Quantum Mechanics.
- 821. Conduction of Electricity through Gases.
- *822. Radioactivity.
- 830. Research Laboratory.
- 831. Research Laboratory.
- 832. Research Laboratory.
- 851-852. Seminary in Theoretical Physics.

For description of graduate courses in this department see the Bulletin of the Graduate School.

PHYSIOLOGY

Office, Hamilton Hall

PROFESSORS SEYMOUR, BLEILE AND NICE, ASSISTANT PROFESSORS McPEEK, AND E. P. DURRANT, MR. HITCHCOCK, MR. R. R. DURANT, MR. HAMILIN, AND DEPARTMENT ASSISTANTS

401. Elementary Physiology. Five credit hours. Autumn Quarter. Five hours of lectures or recitations each week. Not open to Freshmen. Open to students having no credit in chemistry; students having credit in chemistry will elect Physiology 407. Mr. Bleile and assistants.

A course presenting the principles of physiology in a non-chemical manner; otherwise similar to Physiology 407.

This course is not open to students who have credit for any courses in physiology.

402. Elementary Physiology. Five credit hours. Winter Quarter. Five hours of lectures or recitations each week. Prerequisite, Physiology 401. Mr. Bleile and assistants.

A continuation of Physiology 401, presenting in a non-chemical manner the physiological phenomena outlined in Physiology 408-409.

* Not given in 1928-1929.

407. Elementary Physiology. Five credit hours. One Quarter. Autumn and Winter. Three hours of lectures or recitations and four hours of laboratory each week. Prerequisite, one Quarter of Chemistry or one unit of high school chemistry. Not open to Freshmen. Mr. Seymour, Mr. Bleile, Mr. E. P. Durrant, Mr. Hitchcock, Mr. R. R. Durant and assistants.

A foundation course in the fundamental principles of animal physiology, including the chemical and physical structure of animate matter; the reactions involved in animals, including the human body in responding to environmental conditions; the formation, structure, and functions of blood and lymph; and the fundamental structure of the nervous system with particular emphasis on reflex actions. A survey of the conditions determining the activities of living forms.

This course is not open to students who have credit for any courses in physiology.

408. Elementary Physiology. Five credit hours. One Quarter. Winter and Spring. Three hours of lectures or recitations and four hours of laboratory each week. Prerequisite, Physiology 407. Not open to Freshmen. Mr. Seymour, Mr. Bleile, Mr. E. P. Durrant, Mr. Hitchcock, Mr. R. R. Durant and assistants.

Either this course or Physiology 409 may be chosen by the student as a continuation of Physiology 407, or this course may follow Physiology 409 if the student so elects. This course presents the elementary study of respiration, foods, digestion, metabolism and excretion.

Not open to students who have credit for Physiology 404.

409. Elementary Physiology. Five credit hours. One Quarter. Winter and Spring. Three hours of lectures or recitations and four hours of laboratory each week. Prerequisite, Physiology 407. Not open to Freshmen. Mr. Seymour, Mr. Bleile, Mr. E. P. Durrant, Mr. Hitchcock, Mr. R. R. Durant and assistants.

Either this course or Physiology 408 may be chosen as the continuation of Physiology 407. This course may precede or follow Physiology 408. An elementary study of circulation, the organs of internal secretion, the central nervous system, and the special senses.

Not open to students who have credit for Physiology 404.

FOR ADVANCED UNDERGRADUATES AND GRADUATES

According to the University regulations, courses in this group are not open to Freshmen and Sophomores.

615. Advanced Physiology. Five credit hours. Autumn Quarter. Four lectures or quiz and six laboratory hours each week. Prerequisites, two Quarters of Physiology or equivalent biological training. Mr. Nice, Mr. McPeck, and assistants.

This course deals with the physiology of the contractile tissues, reflexes, autonomic nervous system, lymph, blood and circulation.

Not open to students who have credit for Physiology 601.

616. Advanced Physiology. Five credit hours. Winter Quarter. Four lectures or quiz and six laboratory hours each week. Prerequisites, two Quarters of Physiology or equivalent biological training. Mr. Nice, Mr. McPeck, and assistants.

A study of respiration, foods, digestion, metabolism, excretion, internal secretions, central nervous system, and special senses.

Not open to students who have credit for Physiology 602.

617. General Physiology. Five credit hours. Spring Quarter. Three lecture or quiz and four laboratory hours each week. Prerequisites, two Quarters of Physiology or equivalent biological training and one Quarter of organic chemistry. Mr. Hitchcock.

This course deals with the fundamental physico-chemical principles involved in the physiological manifestations of life. A study is made of the physico-chemical constitution of living matter, surface tension, diffusion, osmotic pressure, the physiological significance of the colloid state and the part played by electrolytes and ionic concentration in vital phenomena.

Not open to students who have credit for Physiology 406.

618. Physiology of Metabolism. Three or five credit hours. Autumn Quarter. Three lecture hours or three lecture hours and six laboratory hours each week. Prerequisites, three Quarters of chemistry and two Quarters of physiology or equivalent biological training. Mr. Hitchcock.

This course deals with both the theoretical and practical aspects of human metabolism as measured by determination of the respiratory exchanges. Some of the more important abnormal variations in the metabolic rate are considered. In the laboratory the student is familiarized with some of the simpler types of apparatus for measuring the metabolic rate.

619. Physiology of Reproduction. Three or five credit hours. Winter Quarter. Three lecture hours or three lecture hours and six laboratory hours each week. Prerequisites, two Quarters of physiology or equivalent biological training. Mr. E. P. Durrant.

This course considers the fundamental phenomena of reproduction in both the simpler and higher forms of living matter. It presents a brief survey of embryonic development, and a study of the mammalian gonads with particular emphasis on their hormonal relation. The laboratory work will be devoted to demonstrating the activities of the gonads and the resulting effects upon body processes.

620. Physiology of Exercise. Three or five credit hours. Spring Quarter. Three lecture hours or three lecture hours and six laboratory hours each week. Prerequisites, two Quarters of Physiology. Mr. Hamlin.

This course considers the nature of muscular activity, muscle strain, staleness, mechanical efficiency, the sources of energy for muscular activity, systemic coordination during exercise, the general benefits accruing from exercise, and the special physiological value of different types of muscular activity.

FOR GRADUATES

An undergraduate student shall not be permitted to take any course in the "800" group except by permission of the Graduate Council.

801. Research Physiology: Minor.

802. Research Physiology: Minor.

803. Research Physiology: Minor.

804. Research Physiology: Major.

805. Research Physiology: Major.

806. Research Physiology: Major.

For description of graduate courses in this department see the Bulletin of the Graduate School.

POLITICAL ECONOMY
(See Economics and Sociology)

POLITICAL SCIENCE
Office, 102 University Hall

PROFESSORS SPENCER AND COKER, MR. PADDOCK, MR. HELMS, MR. POLLARD, MRS. FEARING, AND DEPARTMENT ASSISTANTS

401. American Federal Government. Five credit hours. One Quarter. Autumn, Winter, Spring. It is strongly recommended that this course be preceded by two Quarters in college history; it must precede all other courses in this department. Not open to Freshmen. All instructors.

A general survey of the Constitution: the organization and functions of the national government; its relation to the states; political parties.

402. Government and Politics of Foreign Countries. Five credit hours. One Quarter. Autumn, Winter, Spring. Prerequisite, Political Science 401. All instructors.

A study of the governments of England, France, Germany, Switzerland, and other countries of chief interest. Special attention will be given to characteristic institutions, such as the English cabinet system, French administrative organization and justice. Swiss direct democracy; proportional representation; the problem of self-government and empire.

403. American State and Local Government. Five credit hours. One Quarter. Winter and Spring. Prerequisites, Political Science 401, and (except by special permission) 402. All instructors.

A general survey of state constitutions, and of the structure and functions of state and local institutions in the United States.

FOR ADVANCED UNDERGRADUATES AND GRADUATES

According to the University regulations, courses in this group are not open to Freshmen and Sophomores.

604. State Legislative and Administrative Problems. Three credit hours. Spring Quarter. Three meetings each week. Prerequisites, Political Science 401 and 403.

The scope of state powers and activities; problems and methods of state government in the fields of finance, business and industrial regulation, and legislative procedure; the executive budget and administrative reorganization.

607. Municipal Government. Five credit hours. Autumn Quarter. Five meetings each week. Prerequisites, Political Science 401 and 402.

A comparative study of modern municipalities in the United States and the principal countries of Europe; their social significance; their governmental structure; their relation to the state; the experience with government by council, mayor, commission, and manager; methods of popular participation. Lectures, investigations, and reports on particular cities.

608. Municipal Functions. Three credit hours. Winter Quarter. Three meetings each week. Prerequisites, Political Science 401, 402, and 607.

A study of the activities of modern municipalities: the organization, methods employed, policies and problems in the fields of finance; health and sanitation; police and fire protection; education; city planning; housing; public utilities; charities and corrections; recreations.

635. Election and Parties. Five credit hours. Autumn Quarter. Five meetings each week. Prerequisites, Political Science 401 and 402 or 403.

A study of voting qualifications, ballot forms, the direct-primary and other forms of nomination, systems of proportional representation, the organization and methods of political parties, and the position and function of the party system in democracies.

705-706-707. Honors Course. Three to five credit hours. Autumn, Winter, Spring Quarters. Informal conferences, the intent being to allow full scope to the initiative of the student. Prerequisites, Senior standing and forty hours of credit in the social sciences, including fifteen hours in political science, with the record of "A" in at least half of the Political Science courses and an average of "B" in the remainder. At least two Quarters required of candidates for the degree of Bachelor of Arts with Distinction in Political Science. All instructors.

A special topic is assigned to each student each Quarter, and results are tested by the requirement of theses and special examinations. Failure to receive a grade of "B" in this course is a disqualification for special honors.

PRINCIPLES AND PRACTICE OF EDUCATION

Office, 115 Education Building

PROFESSORS BODE, TWISS, BRIM, THAYER, AND PAHLOW, ASSISTANT PROFESSORS LANDSITTEL AND BRONSKY, MR. HULLFISH, MR. MADDOX, MR. ALBERTY, MR. KAISER, AND DEPARTMENT ASSISTANTS

Principles and Practice of Education 401 is a prerequisite for all other courses in the department. By special arrangement persons of maturity and experience may be admitted to other courses without this prerequisite. Additional prerequisites for the several courses are indicated below. Four credit hours from Principles of Education 660, 661, 364, 365, 382, 383 are required of all students in the College of Education who are majoring in the non-biological sciences.

GENERAL PRINCIPLES

401. Principles of Education. Five credit hours. One Quarter. Autumn, Winter, Spring. Three lectures and two quiz sections each week. Required in the College of Education. Prerequisite, five Quarters of university work. Mr. Bode, Mr. Thayer, Mr. Maddox, Mr. Alberty, and assistants.

An inquiry into the meaning of education, the nature and function of ideals, and the nature of the thinking process in its bearing on educational procedure.

This course is not open to students who have credit for Principles of Education 301 or 302 or 402 or 403.

406. Contemporary Educational Practices. Three credit hours. Spring Quarter. Prerequisite, Principles of Education 401. Mr. Brim.

A survey of various educational practices and an attempt to appraise them in the light of constructive educational principles.

FOR ADVANCED UNDERGRADUATES AND GRADUATES

According to the University regulations, courses in this group are not open to Freshmen and Sophomores.

601. Moral Ideals in Education. Three credit hours. One Quarter. Autumn and Spring. Prerequisite, Senior standing in the College of

Education, or twenty-five Quarter hours in educational subjects, philosophy or psychology. Mr. Alberty, Mr. Maddox.

A consideration of types of moral ideals, of the relation of moral values to school subjects, and of the question of direct and systematic moral instruction in the schools.

This course is not open to students who have credit for Principles of Education 350.

605. Cultural and Vocational Ideals in Education. Three credit hours. Winter Quarter. Prerequisite, Senior standing in the College of Education or twenty-five Quarter hours in educational subjects, philosophy or psychology. Mr. Maddox.

A study of cultural and vocational aims, with reference to their historic background and contemporary opinion, and in their significance for a democratic society.

This course is not open to students who have credit for Principles of Education 352.

619. Social Aims in Education. Three credit hours. Winter Quarter. Prerequisite, Senior standing in the College of Education or twenty-five Quarter hours in educational subjects, philosophy or psychology. Psychology 621 and History of Education 403 are desirable but not required, as prerequisite or concurrent courses. Mr. Maddox.

A study of typical theories as to the social purpose of education, with special emphasis upon their significance for moral and democratic ideals, and upon the function of the school as a means of social progress.

This course is not open to students who have credit for Principles of Education 450.

620. Conceptions of Mind in Educational Theory. Three credit hours. Autumn Quarter. Prerequisite, Senior standing in the College of Education or twenty-five Quarter hours in educational subjects, philosophy or psychology. Mr. Bode, Mr. Maddox.

A study of the doctrines of mind that have exercised a determining influence upon educational theory and practice.

This course is not open to students who have credit for Principles of Education 354.

640. Modern Tendencies in Education. Three credit hours. Spring Quarter. Prerequisite, Senior standing in the College of Education or twenty-five Quarter hours in educational subjects, philosophy or psychology. Mr. Bode, Mr. Maddox.

A discussion of current doctrines and controversies, in the light of their historic background and their philosophical implications.

This course is not open to students who have credit for Principles of Education 356.

643. Theories of Interest in Education. Three credit hours. Winter Quarter. Prerequisite, Senior standing in the College of Education or twenty-five Quarter hours in educational subjects, philosophy or psychology. Mr. Alberty.

The role of interest in modern educational procedure, with special reference to the historical development and present interpretations of the project method of teaching.

645. Social Education. Three credit hours. Spring Quarter. Wide readings, papers, lectures, and discussions. Prerequisite, Senior standing in the College of Education or twenty-five Quarter hours in educational

subjects, philosophy or psychology. Students electing this course may offer Sociology 401 as part of the twenty-five hours of prerequisite. Students who have had no sociology are urged to take Sociology 401 concurrently with this course. Mr. Lumley.

An examination of educational agencies and processes other than those of the school, which contribute to the enlightenment and socialization of the individual. An analysis of childhood's isolation, the methods of communication and control, the influence of the family, the playgrounds, the industrial organization, the church and the state.

651. Minor Problems. One to four credit hours. Autumn, Winter, Spring Quarters. Before registering for this course students must secure the permission of the instructor. Mr. Bode and others.

Investigation of minor problems in the field of principles and practice of education.

By permission of the Head of the Department and the Director of the Bureau of Educational Research, students enrolled in this course may obtain credit for research work done under the auspices of the Bureau staff.

†667. The Dalton Plan in Relation to New Movements in Education. Two credit hours. Open to advanced undergraduate and graduate students in the College of Education. Miss Parkhurst.

In this course a brief and careful survey will be made of the newer ideas in education, such as the Gary Plan, Winnetka Technique, the Morrison Plan, etc. Certain methods of presenting subject matter will also be considered. These ideas will be discussed in their relationship to the Dalton Plan.

680. The Place of the Schools in the Social Organization. Three credit hours. Spring Quarter. Lectures and discussions. Prerequisite, Senior standing in the College of Education or twenty-five Quarter hours in educational subjects, philosophy or psychology. Mr. Maddox.

An examination of the aims and purposes of the school in a democratic society. The bearing of contemporary theories and practice upon educational programs in public school systems. The relation of the school and other community and state agencies of an educational character.

This course is not open to students who have credit for Principles of Education 380 or 381.

682. The Educative Process. Three credit hours. Autumn Quarter. Lectures and conferences. Prerequisites, Senior standing in the College of Education and Principles of Education 620, or twenty-five hours in educational subjects, philosophy or psychology, including Principles of Education 620 and Psychology 401. These requirements may be modified by special request, in the case of persons of maturity and experience. Mr. Thayer.

A comparative study of contemporary writers and movements in the field of education for the purpose of appraising, developing and formulating their contributions to educational theory and practice.

683. The Thinking Process in its Educational Bearings. Three credit hours. One Quarter. Autumn and Spring. Lectures and conferences. Prerequisites, Senior standing in the College of Education or twenty-five hours in educational subjects, philosophy or psychology, including a course in principles of education and a course in psychology.

† Not given during the academic year 1928-1929.

These requirements may be modified by special request, in the case of persons of maturity and experience. Mr. Alberty, Mr. Maddox.

A study of the thinking process, for the purpose of tracing its implications for educational theory and classroom practice.

***684. The Place of Scientific Method in Education.** Three credit hours. Prerequisites, Senior standing in the College of Education and Principles of Education 640, or twenty-five hours in educational subjects, philosophy or psychology, including Principles of Education 640 and Psychology 401, and three Quarters of college science. These requirements may be modified by special request, in the case of persons of maturity and experience.

An inquiry into the precise nature and field of scientific method, together with a discussion of the important contributions of the method to educational practices and a consideration of the possible limitations of the application of science to education.

SECONDARY EDUCATION

410. Methods of High School Teaching. Five credit hours. One Quarter. Autumn and Spring. Required in Education-Science Nursing. Prerequisites, Principles of Education 401 and a course in educational psychology. This course must be taken concurrently with Principles of Education 440 by students doing supervised teaching in English, history, foreign language, mathematics, science, and industrial arts education. This course may be elected independently in the Summer Quarter by teachers of experience. Mr. Twiss, Mr. Thayer, Mr. Pahlow, Mr. Landsittel, Mr. Hullfish, Mr. Maddox, Mr. Alberty.

A study of general and special methods; observation and criticism of classroom work in high school.

This course is not open to students who have credit for Principles of Education 312 or 313 or 411 or 412.

440. Supervised Teaching in Secondary Schools. Five credit hours. One Quarter. Autumn and Spring. Required in the College of Education. Prerequisites, Senior standing, registration in the College of Education, Principles of Education 401, and an average point-hour ratio of 2.25 in the major as stated in the note below. This course must be taken concurrently with Principles of Education 410 by students doing supervised teaching in English, history, foreign language, mathematics, science and industrial arts education. Open only to students in the College of Education. Mr. Thayer, Mr. Pahlow, Mr. Landsittel, Mr. Twiss, Mr. Hullfish, Mr. Maddox, Mr. Alberty.

Supervised teaching, ten weeks.

NOTE: An average point-hour ratio of 2.25 in the major subject on all courses taken at this University after the Summer Quarter 1928 will be required for admission to supervised teaching (Principles of Education 440 or 441). Students transferring from other institutions and requesting credit for Principles of Education 440 will be required to fulfill the 2.25 point-hour ratio before such credit shall be granted. Application of the rule to transferred students shall terminate at the close of the Quarter preceding the Quarter of graduation.

Students registering for this course should report to the office of the Department of

* Not given in 1928-1929.

Principles of Education immediately after their schedules have been approved, and fill out a supervised teaching placement card.

NOTE: For Principles of Education 485, Principles and Methods of Teaching Commercial Subjects, see Vocational Education, page 226.

FOR ADVANCED UNDERGRADUATES AND GRADUATES

According to the University regulations, courses in this group are not open to Freshmen and Sophomores.

NOTE: Courses 700 to 760 inclusive will not be counted toward a graduate major or minor in the Department of Principles and Practice of Education.

606. Principles and Methods of Junior High School Teaching. Five credit hours. Winter Quarter. Prerequisites, Principles of Education 401 (or 301 and 302), a course in educational psychology, and five additional hours in educational subjects. Mr. Landsittel.

The reorganization movement in secondary education. Adaptation of curriculum and methods to the conditions of early adolescence, with special reference to diversity of interests and capacities. Preservation of essential community of experience. Supervised study. The problem-project method of approach.

This course is not open to students who have credit for Principles of Education 420 or 421 or 422 or 314 or 315 or 351 or 353.

610. Supervision of Teaching in Secondary Schools. Three credit hours. Autumn Quarter. Open to Seniors in the College of Education or to graduate students majoring or minoring in principles of education; practical teaching experience of at least two years is a further prerequisite. Persons of maturity and experience who have not the prerequisite may be admitted by permission of the instructor. Mr. Thayer.

The problems involving cooperation between supervisors and teachers. Approved practices in the supervision of classroom work and the evaluation of methods and results.

This course is not open to students who have credit for Principles of Education 357 or 358.

625. Problems of Curriculum Construction in Secondary Education. Three credit hours. Winter Quarter. Open to Seniors in the College of Education or to graduate students majoring or minoring in principles of education. Persons of maturity and experience who have not the prerequisite may be admitted by permission of the instructor. Mr. Thayer.

A critical survey of the tendencies which have determined the character and content of the secondary school curriculum and an evaluation of present procedures in curriculum construction.

This course is not open to students who have credit for Principles of Education 362 or 363.

651. Minor Problems. One to four credit hours. Autumn, Winter, Spring Quarters. Before registering for this course students must secure the permission of the instructor. Mr. Bode and others.

Investigation of minor problems in the field of principles and practice of education.

By permission of the Head of the Department and the Director of the Bureau of Educational Research, students enrolled in this course may obtain credit for research work done under the auspices of the Bureau staff.

660. Methods and Problems of the Physical Sciences. Four credit hours. Autumn Quarter. Prerequisite, a total of twenty hours in

physics or chemistry or twenty hours in physics and chemistry. Mr. Twiss.

Students in the College of Education who are majoring in any of the non-biological sciences must secure credit for four hours of work in Principles of Education 660, 661, 364, 365, 382, 383. These courses are elective for other students in the College of Education and for students in the other colleges.

The purposes of this course are: (1) to trace the ideas which have dominated creative thinking in the physical sciences; (2) to discuss the factors which have given direction and impetus to the development of these sciences; (3) to study the subjects and personalities that have had most to do with their development; (4) to give an understanding of the methods by which the outstanding scientific work has been done and the methods by which it must be stimulated in others; (5) to discuss the scope, opportunities, important problems and centers of development in the physical sciences; (6) to interpret the influence of science in education and in civilization; (7) to give a comprehensive picture of the nature, influence, and development of the scientific mind.

This course is not open to students who have credit for Principles of Education 364 or 365.

661. Methods and Problems of the Physical Sciences. Four credit hours. Spring Quarter. Prerequisites, a total of twenty hours in physics or chemistry or twenty hours in physics and chemistry. Mr. Twiss.

Continuation of Principles of Education 660.

This course is not open to students who have credit for Principles of Education 382 or 383.

663. The History Course of Study in Secondary Schools. Five credit hours. Spring Quarter. Open to Juniors and Seniors majoring or minoring in history and, with the consent of the instructor, to other properly-qualified students. Prerequisite for those who intend to do supervised teaching in the social studies. Mr. Pahlow.

The selection and organization for teaching purposes of materials from ancient, medieval, modern, and world history; events, movements, and personages to emphasize; classroom and library equipment appropriate to each field—textbooks and books for reference and collateral reading; maps, charts, and other illustrative material.

This course is not open to students who have credit for Principles of Education 384 or 385.

NOTE: Students intending to do supervised teaching in the Spring Quarter of 1928-1929 who have not had Principles of Education 663 must take the course during that Spring Quarter.

†665. Civic Education in Secondary Schools. Three credit hours. Prerequisite, fifteen hours above Freshman standing of social science other than history. Mr. Pahlow.

The selection and organization for teaching purposes of materials from the various social studies for secondary school courses in community civics, problems of democracy, and the like; methods of procedure, recent experimental courses of study, classroom and library equipment.

NOTE: For Industrial Arts Education 685, the Teaching of Industrial Arts in the Secondary Schools, three credit hours, Winter Quarter, see page 141.

700. The Teaching of History. Three credit hours. Autumn Quarter. Three meetings each week. This course must be taken by all who expect to be recommended for teaching positions in the subject. Prerequisites, at least Junior standing and four Quarters of history; must

† Not given during the academic year 1928-1929.

be preceded or accompanied by a fifth course. Of these, two should be in medieval and modern European history or in English history, and at least two (preferably three) in American history. Mr. Knight.

Lectures, readings, and quiz upon methods of teaching history in the secondary schools, organization of material, equipment of classrooms, examination of textbooks, an intensive study of practice problems confronting the teacher of history in the secondary schools in the preparation of lessons for teaching, and the conducting of classroom exercises.

This course is not open to students who have credit for American History 610.

705. The Teaching of Biology. Three credit hours. Spring Quarter. Three recitations each week. Prerequisites, Botany 401-402, Zoology 401-402, and at least four additional Quarters of some biological subject. Mr. Transeau (Botany), Mr. Barrows (Zoology).

This course is given primarily for the students in the College of Education who expect to teach high school biology. The work will include lectures and demonstrations with discussion of the best methods of presenting botany, zoology, and biology to high school students.

This course is not open to students who have credit for Botany 515 or Zoology 515.

710. The Teaching of Chemistry. Three credit hours. Spring Quarter. Three conferences each week. Prerequisites, acceptable courses in general, analytical, and organic chemistry. Mr. McPherson.

This course stresses such subjects as the content of the high school course, the literature bearing on all subjects pertaining to the teaching of chemistry in the secondary schools, planning of laboratories, purchase of supplies and similar problems confronting the teacher of chemistry.

This course is not open to students who have credit for Chemistry 781.

715. The Teaching of English. Three credit hours. One Quarter. Autumn and Spring. Exclusively for Seniors and graduate students. Prerequisite, Public Speaking 459. Mr. Denney, Mr. Hullfish.

This course is not open to students who have credit for English 681.

†716. The Teaching and Supervision of Journalism in Secondary Schools. Three credit hours. Four recitations and four hours of laboratory work on the Lantern each week. Not open to Freshmen. Mr. Getzloe.

This course is intended for persons who have been teaching or who expect to teach journalism in secondary schools, or to act as faculty advisers for school newspapers, magazines, or annuals. It includes a general survey of the editorial, business, and mechanical activities of newspaper and magazine publication, with special emphasis on those which are of greatest value and interest to students.

This course is open only to students registered in the College of Education and graduate students, except by special permission.

717. The Teaching of Dramatics. Five credit hours. Autumn Quarter. Open to Seniors by special permission.

Exercise in dramatization for secondary schools. Lectures on the organization of dramatics courses and the production of plays in high schools.

†725. The Teaching of German. Three credit hours. Three hours

† Not given during the academic year 1928-1929.

lecture and quiz each week. Prerequisites, six Quarters of college German, and consent of the instructor. Mr. Evans.

A critical study of the methods of teaching modern foreign languages. Lectures, reports, and practice teaching.

This course is not open to students who have credit for German 665.

730. Methods of Teaching Latin. Three credit hours. Autumn Quarter. Three lectures each week. Prerequisite, six Quarters of college Latin. Mr. Hodgman.

Lectures and assigned readings on methods of teaching Latin in the secondary schools. Place and value of Latin in education; bibliography; illustrative exercises in the Latin authors used in high schools.

This course is not open to students who have credit for Latin 617 or 731.

†**731. The Teaching of Latin.** Three credit hours. Prerequisite, six Quarters of college Latin, or consent of the instructor. Mr. Ogle.

A general course based primarily upon the authors read in the secondary schools. Selections from each will be studied in detail to afford practice in the fundamentals of grammar, in the art of expression, and in the arts of translation and interpretation. Topics directly concerned with the work of the classroom will be discussed, such as the ends of the study, the methods best adapted to attain them, the place and purpose of prose composition, the use of translation, illustrative material.

This course is not open to students who have credit for Principles of Education 730 or Latin 617.

735. The Teaching of Mathematics. Three credit hours. Autumn Quarter. Three recitations each week. Lectures and discussions. Required of students in the College of Education who are majoring in mathematics. Prerequisite, Mathematics 442 or experience in teaching secondary mathematics. Mr. Arnold.

The educational value of the study of mathematics; the content matter of the various courses in the junior and senior high schools; modes and methods; recent and contemporary studies of the teaching of mathematics.

This course is not open to students who have credit for Mathematics 681.

740. The Teaching of French. Three credit hours. Winter Quarter. Three lectures each week. Prerequisites, French 410, 627, and 628. Required of all students desiring the department recommendation as a teacher of French. Mr. Rockwood.

Special problems and difficulties in the teaching of French. Teacher's equipment. Classroom aids. Lectures, discussions, practice in conducting recitations.

This course is not open to students who have credit for French 622.

745. The Teaching of Spanish. Three credit hours. Spring Quarter. Three recitations each week. Prerequisites, Spanish 617 and 620. Mr. Hendrix, Mr. Russell.

Methodology and bibliography.

This course is not open to students who have credit for Spanish 618.

750. The Teaching of Mechanical Drawing. Three credit hours. Autumn Quarter. One lecture and two three-hour laboratory periods each week. Mr. French.

This course is not open to students who have credit for Engineering Drawing 431 or 531.

† Not given during the academic year, 1928-1929.

751. The Teaching of Mechanical Drawing. Three credit hours. Winter Quarter. One lecture and two three-hour laboratory periods each week. Prerequisite, Principles of Education 750. Mr. French.

This course is not open to students who have credit for Engineering Drawing 432 or 532.

755. The Teaching of Physics. Three credit hours. Spring Quarter. Prerequisite, two Quarters' work in college physics. Mr. Cole.

This course is not open to students who have credit for Physics 420.

760. Spoken and Written English: Teachers' Course. Three credit hours. Winter Quarter. Open to teachers or prospective teachers only. Mr. Wiley.

Classroom lectures and discussion designed to assist teachers of public speaking and debating in secondary schools. The nature of speech training in the secondary schools. Definite suggestions in the following: how to prepare students for debating and speaking contests; speech composition and delivery; classroom reports. This is not a course in speech practice.

This course is not open to students who have credit for Public Speaking 680.

770. The Teaching of Nursing. Three credit hours. Spring Quarter. Three recitations each week. Education-Science Nursing, fourth year. Prerequisite, three years of training in an accredited school of nursing or Senior standing in the College of Education with major in nursing, physical education, home economics, or biological sciences.

Selection and arrangement of subject matter used in schools of nursing, planning lessons and demonstration, equipment of classroom, and other teaching equipment recommended by the State Medical Boards.

Not open to students who have credit for Science Nursing 653.

NOTE: For teaching courses in Physical Education see the Department of Physical Education.

ELEMENTARY AND RURAL EDUCATION

430. Principles and Methods of Elementary School Teaching. Five credit hours. Winter Quarter. Curriculum for Elementary Teachers, fourth year. Prerequisite, Principles of Education 401. This course must be taken concurrently with Principles of Education 441. Miss Bronsky.

This course is designed to accompany supervised teaching, and on the basis of direct classroom contacts thus furnished, to extend and integrate the benefits of professional courses previously taken. Problems of management and method will be dealt with in a manner calculated to develop in the student capacity for intelligent professional reaction to the teaching situation.

This course is not open to students who have credit for Principles of Education 303.

441. Supervised Teaching in Elementary Schools. Ten credit hours. Winter Quarter. Curriculum for Elementary Teachers, fourth year. Prerequisite, Senior standing and registration in the College of Education, and Principles of Education 401, and an average point-hour ratio of 2.25 in the major, as stated in the note below. This course is open only to students in the College of Education. This course must be taken

concurrently with Principles of Education 430, except by special permission. Miss Bronsky.

Students will be expected to devote their full time, under the supervision of the University instructor in charge, to this course and Principles of Education 430.

NOTE: An average point-hour ratio of 2.25 in the major subject on all courses taken at this University after the Summer Quarter 1928 will be required for admission to supervised teaching (Principles of Education 440 or 441). Students transferring from other institutions and requesting credit for Principles of Education 441 will be required to fulfill the 2.25 point-hour ratio before such credit shall be granted. Application of the rule to transferred students shall terminate at the close of the Quarter preceding the Quarter of graduation.

NOTE: For Fine Arts 470, Art Problems for Elementary Teachers, five credit hours, Autumn Quarter, see page 107.

492. The Teaching of Arithmetic in the Elementary Schools. Three credit hours. Autumn Quarter. Required in the curriculum for Elementary Teachers, third year. Prerequisite, Principles of Education 401. Miss Bronsky.

Arithmetic in the elementary schools. Functions as revealed in life activities. How essential concepts are formed. Evaluation of subject-matter and organization of lessons. Motivation and training in thinking through projects and problems. Assignment, presentation, drill, testing, standards of pupil attainment.

This course is not open to students who have credit for Principles of Education 304.

493. The Teaching of English Studies in the Elementary Schools. Three credit hours. Autumn Quarter. Required in the curriculum for Elementary Teachers, third year. Prerequisite, Principles of Education 401. Miss Bronsky.

Reading, English classics, spelling, composition, and grammar. Functions and methods, with attention to silent reading, dramatization, and learning through use. Planning and presentation of lessons. Formal and informal testing, and standards.

This course is not open to students who have credit for Principles of Education 305.

494. The Teaching of History and Citizenship in the Elementary Schools. Three credit hours. Winter Quarter. Required in the curriculum for Elementary Teachers, third year. Prerequisite, Principles of Education 401. Mr. Landsittel.

A consideration of the nature and purpose of history and civics in the grades, together with a critical evaluation of subject matter and methods in relation to social aims and current theories of learning.

This course is not open to students who have credit for Principles of Education 306.

495. Teaching the Primary Grades. Three credit hours. Autumn Quarter. Three lectures each week. Prerequisite, Principles of Education 401 or maturity and experience satisfactory to the instructor. Elective in the College of Education. Miss Bronsky.

A study of the current theory and practice in curriculum content, organization, and methods of teaching in the primary grades with practice lessons in the use of the stereograph, lantern slides, daylight lantern and blackboard in building meaningful backgrounds of experience.

Not open to students who have credit for Principles of Education 316.

496. The Teaching of Geography in the Elementary School. Three credit hours. Autumn Quarter. Three lectures each week. Prerequisite, Principles of Education 401 and Geography 401 and 403, or maturity and

experience satisfactory to the instructor. Elective in the College of Education. Miss Bronsky.

Consideration of the function of geography in the elementary school, suitable content, effective organization, teaching methods and devices, including the use of the stereograph, lantern slides and daylight lantern as a standardized type of visual aid.

Not open to students who have credit for Principles of Education 319.

NOTE: For Teaching Courses in Music see the Department of Music, Courses 447-448.

FOR ADVANCED UNDERGRADUATES AND GRADUATES

According to the University regulations, courses in this group are not open to Freshmen and Sophomores.

612. Survey of Scientific Investigations in Elementary School Subjects. Three credit hours. Spring Quarter. Open to Seniors in the College of Education or graduate students majoring in principles of education. Other persons of maturity and experience may elect the course by permission of the instructor. Mr. Brim.

The contributions of scientific research to the teaching of the elementary school subjects. Methods and results will be examined and the implications for schoolroom procedure considered.

This course is not open to students who have credit for Principles of Education 374.

613. Supervision of Elementary School Teaching. Three credit hours. Spring Quarter. Open to Seniors in the College of Education or graduate students majoring in principles of education. Other persons of maturity and experience may elect the course by permission of the instructor. Mr. Brim.

The distinctive function of supervision, the problems involved, the requirements for efficiency in supervision, the methods of diagnosis and evaluation of teaching and learning procedure, ways and means of improving instruction, maintaining teacher morale, and stimulating cooperative work.

This course is not open to students who have credit for Principles of Education 360 or 361.

614. Curriculum Construction in Elementary Education. Three credit hours. Autumn Quarter. Open to Seniors in the College of Education or graduate students majoring in principles of education. Other persons of maturity and experience may elect the course by permission of the instructor. Mr. Brim.

A critical study of present curriculum materials in relation to school objectives and pupil needs. The former procedure and present tendency in curriculum construction will be evaluated. The most effective type of curriculum, and function of supervisor, teacher, and pupil in its construction will be considered.

615. Experimental Elementary Schools. Three credit hours. Autumn Quarter. Open to Seniors in the College of Education or graduate students majoring in principles of education. Other persons of maturity and experience may elect the course by permission of the instructor. Mr. Brim.

A study of the attempt to demonstrate and test the different educational theories in elementary schools throughout the country. These schools will be studied and evaluated in relation to principles.

This course is not open to students who have credit for Principles of Education 370.

616. Elementary Teacher Training. Four credit hours. Winter Quarter. Open to Seniors in the College of Education or graduate students majoring in principles of education. Other persons of maturity and experience may elect the course by permission of the instructor. Miss Bronsky.

A study of the function, content, and organization of courses of study designed to contribute toward the training of teachers for elementary schools. Standards of organization and training, means of capitalizing subject-matter courses, the interrelations of professional courses, and direction of observation and practice teaching will receive special consideration.

†617. Supervision of Rural Elementary Schools. Three credit hours. Autumn Quarter. Open to Seniors in the College of Education or graduate students majoring in principles of education. Other persons of maturity and experience may elect the course by permission of the instructor. Mr. Brim.

Specific attention will be given to the problems of the supervisor of rural schools. Standards for judging the several activities to be supervised, the analysis and evaluation of the usual procedure, ways and means of improving the teacher's work through conferences, demonstration teaching, directed study of classroom problems, etc., will be discussed.

†618. Rural Teacher Training. Five credit hours. Spring Quarter. Open to Seniors in the College of Education or graduate students majoring in the principles of education. Other persons of maturity and experience may elect the course by permission of the instructor. Mr. Brim.

A course given specifically for those who are responsible for training rural teachers in normal colleges and county normal schools. Problems in teacher training confronted by members of the class will be carefully considered. Desirable curriculum content, organization of work, and provision for observation and practice teaching will be stressed.

This course is not open to students who have credit for Principles of Education 372.

NOTE: For Industrial Arts Education, the Teaching and Supervision of Practical Arts in the Elementary School, Course 623, see page 141.

†633. Supervision of Student Teaching in Elementary Schools. Three credit hours. Open to Seniors in the College of Education or to graduate students majoring in education.

This course is intended for actual or prospective teachers in teacher training institutions and will deal specifically with the problems of observation, participation and student teaching. Effective means for directing observation, guidance of supervised teaching, and methods of strengthening the young teacher through conferences will be considered.

This course is not open to students having credit for Principles of Education 616 or 376.

†634. Professionalized Subject Matter Courses in Teacher Training Institutions. Three credit hours. Open to Seniors in the College of Education or to graduate students majoring in education.

This course is intended for actual or prospective teachers of elementary school subjects in teacher training institutions. A study will be made of the movement to reorganize and enrich methods courses in the normal schools. Consideration will be given

† Not given during the academic year, 1928-1929.

to the nature and criteria of professionalized subject matter courses and to constructive procedures in planning such courses in the elementary school subjects.

This course is not open to students having credit for Principles of Education 616 or 376.

651. Minor Problems. One to four credit hours. Autumn, Winter, Spring Quarters. Before registering for this course students must secure the permission of the instructor. Mr. Bode and others.

Investigation of minor problems in the field of principles and practice of education.

By permission of the Head of the Department and the Director of the Bureau of Educational Research, students enrolled in this course may obtain credit for research work done under the auspices of the Bureau staff.

† **670. The Rural School Curriculum.** Five credit hours. Spring Quarter. Mr. Brim.

The fundamental nature of the curriculum problem. The present approved standards for the elementary curriculum. Desirable differentiation in curricula for urban and rural elementary schools. The course will seek to offer concrete and practical help in reorganizing the curriculum in rural elementary schools in terms of rural school conditions and rural children's experience and needs.

This course is not open to students who have credit for Principles of Education 308 or 377 or 513.

FOR GRADUATES

An undergraduate student shall not be permitted to take any course in the "800" group except by permission of the Graduate Council.

802-803-804. Special Problems in Educational Theory.

811-812-*813. Special Problems in Secondary Education.

***814-*815-*816. Special Educational Problems in the Social Studies in the Secondary Schools.**

***817. Special Educational Problems in the English Studies in the Secondary Schools.**

***819. The Junior College Curriculum.**

821-822. Special Educational Problems in the Physical Sciences in the Secondary Schools.

825-826-827. Special Problems in Elementary Education.

835. The Teaching and Supervision of History in the Secondary Schools.

846-*847-848. Special Problems in the Teaching and Supervision of the Foreign Languages in the Secondary Schools.

851. Major Research.

860. College Teaching.

For description of graduate courses in this department see the Bulletin of the Graduate School.

* Not given in 1928-1929.

† Not given during the academic year, 1928-1929.

PSYCHOLOGY

Office, 325 Education Building

PROFESSORS ARPS, WEISS, BURTT, GODDARD, MAXFIELD, PRESSEY, AND
 TOOPS, ASSISTANT PROFESSORS ROGERS, WILLIAMS, WILSON, AND
 RENSHAW, MRS. PRESSEY, MR. HENDERSON, MR. GLEASON,
 MR. PETERSON, MR. NASH, MRS. NELSON, MR. ARNOLD,
 MR. BIDWELL, MR. GULLIKSEN, MR. IRWIN, MR. JENSEN,
 MR. KURTZ, MR. PRATT, MR. RAINES, AND DEPART-
 MENT ASSISTANTS

The courses offered in psychology fall into five general groups. The following approximate sequences are suggested for the guidance of students desiring a consistent program giving preparation in one of these fields. It is strongly urged, however, that students contemplating such work consult with the department as early as possible with reference to the arrangement of courses. This is particularly the case with graduate students. Thus in planning for a Doctor's degree a reading knowledge of French and German should be acquired during the undergraduate period.

I. General Psychology: 401-402, 406, 601-602-603, 607, 608, 621, 623, 629, 630, 645, 650.

II. Educational Psychology—preparation for psychological work in the schools: 401 and 407 (both required in the College of Education), 608, 610, 662, 613, 614, 615, 616, 611, 628, 651 or 652, 650.

III. Abnormal and Clinical Psychology: 401-402 or 407, 605, 606, 609, 611, 616, 617, 618, 619, 620, 621, 641, 642, 650, 801, 808.

In this division will be found courses serving the following purposes:

- (1) Extending the student's knowledge of another field of psychology.
- (2) Acquainting him with an understanding of the possible derangements or disturbances of mental functions, and the means for correcting in himself or in others.
- (3) Fitting the student for service in one of the rapidly developing fields of mental hygiene as psycho-clinician, teacher, or director of clinics.

(4) A service clinic for the students of the University. Women may consult Miss Emily Leatherman; men, Mr. M. A. Durea. Room 303, Education Building.

IV. Applied Psychology: 401-402, 409, 635, 636, 608, 639, 637, 638, 634, 650.

V. Comparative Psychology: 401-402, 655, 656, 657, 658, 650.

401. Elementary Psychology. Five credit hours. One Quarter. Autumn, Winter, Spring. Five lecture hours each week. Lectures and recitations. All instructors.

An introductory course and fundamental to all subsequent courses in the department.

402. Elementary Psychology. Five credit hours. One Quarter. Autumn, Winter, Spring. Five lecture hours each week. Lectures and recitations. All instructors.

A continuation of Psychology 401.

406. Intermediate General Psychology. Three credit hours. Spring Quarter. Three lecture hours each week. Prerequisite, Psychology 402. Mr. Wilson.

A continuation of Psychology 402, with special emphasis on the fundamental principles and experiments in the general field of psychology.

407. Educational Psychology. Five credit hours. One Quarter. Autumn, Winter, Spring. Five lecture hours each week. Lectures, recitations, and reports. Prerequisite, Psychology 401. All instructors.

The course begins with a brief study of the innate capacities and interests of children and individual differences in these capacities. The major part of the course is devoted to a study of the general laws and conditions of learning and the results of investigations regarding the progress of learning in various school subjects. Throughout

the course experimental data and test results are stressed and practical problems emphasized.

408. Mental Hygiene. Two credit hours. Winter Quarter. Two class meetings each week. Prerequisite, Psychology 407 or 402. Mrs. Pressey.

A general survey of the principles of mental hygiene. A study of mental efficiency, social and emotional adjustment, and personality in light of the principles of mental hygiene.

409. Introduction to Applied Psychology. Three credit hours. Spring Quarter. Three lecture hours each week. Prerequisite, Psychology 402. Mr. Burt.

A systematic discussion of problems, methods, and typical results of psychology in the practical fields of medicine, law, education and business.

411. Psychology of Effective Study. Three credit hours. Winter Quarter. Lectures, discussions, and supervised study. Open to students on probation or to other students by permission of the Secretary of the College or of the instructor. Mrs. Pressey.

An applied course on psychological laws of economical learning. The laws will be not only taught, but demonstrated and applied under the supervision of the instructor. Students who feel themselves handicapped by poor habits of study are urged to enroll in this course.

For further details see the Secretary of the College.

FOR ADVANCED UNDERGRADUATES AND GRADUATES

According to the University regulations, courses in this group are not open to Freshmen and Sophomores.

601. Experimental Psychology. Three credit hours. Autumn Quarter. One lecture and two laboratory periods each week. Prerequisite, Psychology 402. Mr. Renshaw.

This is the fundamental course for General Psychology and is recommended to students expecting to carry on psychological research. The experiments are designed to demonstrate the fundamental laws of human behaviour and to develop the technique of handling standard psychological apparatus.

602. Experimental Psychology. Three credit hours. Winter Quarter. One lecture and two laboratory periods each week. Prerequisite, Psychology 601. Mr. Renshaw.

A continuation of Psychology 601.

603. Experimental Psychology. Three credit hours. Spring Quarter. One lecture and two laboratory periods each week. Prerequisite, Psychology 602. Mr. Renshaw.

A continuation of Psychology 602.

605. Physiological Psychology. Three credit hours. Autumn Quarter. Three lectures each week. Prerequisite, Psychology 401-402. Mr. Goddard.

The aim of this course is to give a consistent picture of the physical basis of mind. It uses the important facts of the anatomy and physiology of the central and autonomic nervous systems and the more generally accepted theories of nerve functions and their correlations with mental processes. It is adapted to the needs of medical students and those taking courses in abnormal psychology and the mentally deficient child.

606. Advanced Physiological Psychology. Three credit hours. Winter Quarter. Three lectures each week. Prerequisite, Psychology 605 or permission of the instructor. Mr. Goddard.

This course will deal with the larger problems of the dependence of mental phenomena upon physiological processes such as: the emotions and the sympathetic system; temperament and the endocrines; consciousness and the circulation; nerve activity without consciousness; effect of unusual physiological conditions (e.g., produced by fatigue, alcohol, syphilis, or other toxins) upon various mental processes.

607. Genetic Psychology. Five credit hours. Spring Quarter. Five lecture hours each week. Lectures, recitations, and reports. Prerequisite, Psychology 401-402 or 407. Mr. Williams.

This course is designed to present the facts of mental development and their significance. Topics considered are: individual development, particularly with reference to the development of the nervous system; inheritance of mental traits; innate tendencies, their characteristics, description, and modification; play; mental states, their physiological basis and development with growth and training; moral and religious development; physical development; methods of child study; exceptional children (observation of atypical children in city and state institutions).

608. Educational Statistics: Elementary. Three credit hours. Autumn Quarter. Two lectures and one two-hour laboratory period each week. Mr. Toops.

A basic statistical course for students intending to conduct major or minor research. Frequency distributions, methods of measuring central tendencies and variability; construction of graphs and charts; interpretation of results in terms of probability; simple treatment of correlation. Extended practice in the use of calculating machines and computational devices.

This course is not open to students who have credit for School Administration 613 or 643.

609. The Exceptional Child. Three credit hours. Spring Quarter. Three lecture hours each week. Lectures, reports, clinics, and visits to public institutions. Prerequisite, fifteen hours of psychology or ten hours of psychology and five hours of professional educational subjects or sociology. Mr. Maxfield.

Individual differences among children with respect to mental, physical, and social traits. The social and pedagogical significance of talent and defect. Consideration of gifted children, special abilities and disabilities, blindness, deafness, speech defect, and minor behaviour problems. Emphasis will be placed on the psychology of the exceptional child as a foundation for educational classification and treatment. The scope of this course includes all exceptional children not included under Psychology 611 and 622.

610. Adolescence. Three credit hours. Autumn Quarter. Three lectures each week. Prerequisite, Psychology 407 or 402. Mrs. Pressey.

A study of the outstanding characteristics of the adolescent boy and girl, the educational and social problems arising at this period, and means for dealing with these problems.

611. The Mentally Deficient Child. Three credit hours. Winter Quarter. Three lecture hours each week. Lectures, reports, clinics, and visits to public institutions. Prerequisite, fifteen hours of psychology or ten hours of psychology and five hours of professional educational subjects or sociology. Mr. Maxfield.

The varieties and grades of mental deficiency, including the backward child of the schools and the distinctly feeble-minded. Consideration of mental deficiency and defect for purposes of educational treatment and social disposition. The psychology of

feeble-mindedness; types, degrees, causes, and consequences. Minor consideration of the special pedagogy of backward children.

612. Educational Statistics: Intermediate. Three credit hours. Winter Quarter. Two lectures and one two-hour laboratory period each week. Prerequisite, Psychology 608 or School Administration 613 or 643 or equivalent. Mr. Toops.

Fuller treatment of correlation; regression coefficients and equations; partial and multiple correlation; uses of normal probability curve; reliability and validity of test data; comparable measures.

This course is not open to students who have credit for School Administration 644.

613. Mental and Educational Tests. Three credit hours. Winter Quarter. Three lecture hours each week. Lectures, readings, classroom demonstrations, and special reports. Prerequisite, Psychology 402 or 407. Mr. Pressey.

A brief course covering the use of tests of both ability and school work. The course will begin with a discussion of tests in arithmetic, reading and history, and other school subjects, will then take up tests of intelligence and will conclude with a general discussion of the handling of test scores and of the use to be made of these scores in dealing with practical problems.

***614. Problems of Test Work.** Three credit hours. One Quarter. Three lectures each week. Lectures, readings in educational periodicals, discussion. Prerequisite, Psychology 613 or its equivalent, or (by permission of the instructor) extended experience in the use of tests. Mr. Pressey.

Reliability and validity of tests. Interpretation of scores. Statement of results; graphing. Criteria for selecting tests; organization of test work; records; application of test results in dealing with educational problems. The work will be illustrated throughout by use of standard mental and educational tests. Students having data of their own are urged to make use of this material in working out application of the principles discussed.

615. Laboratory in Tests and Educational Diagnosis. Three credit hours. Spring Quarter. Six laboratory hours each week. Prerequisite, Psychology 613 or permission of the instructor. Mrs. Pressey.

Practice in the giving and scoring of tests and in the use of tests in dealing with educational problems. Special attention will be given to use of test materials in the diagnosis of special disabilities and difficulties in school work.

616. Individual Mental Tests. Two credit hours. One Quarter. Autumn and Winter. Two laboratory periods each week. Lectures, reports, laboratory, demonstrations, and individual testing. Prerequisite, fifteen hours of psychology or ten hours of psychology and five hours of professional educational subjects or sociology. Mr. Goddard, Mr. Maxfield, and assistants.

Practice in the technique of the Binet-Simon scale for measuring intelligence. Brief historical and descriptive treatment of the Binet scale followed by intensive training in the practical Binet testing of school children.

617. Elementary Psychological Clinic. Two credit hours. One Quarter. Winter and Spring. Two laboratory periods each week. Lec-

* Not given in 1928-1929.

tures, reports, demonstrations, laboratory and individual testing. Prerequisite or concurrent, Psychology 616. Mr. Goddard, Mr. Maxfield, and assistants.

Advanced study and application of the Binet-Simon scale for measuring intelligence. Psychology of Binet tests with study of the statistical principles involved in the construction of the scale. Descriptive study of the various modifications of the Binet-Simon scale. Intensive laboratory training in advanced Binet testing, with special emphasis on the diagnostic use of the test and qualitative interpretation of results.

618. Clinical Mental Tests. Two credit hours. One Quarter. Autumn and Spring. Two laboratory periods each week. Lectures, laboratory, and individual testing. Prerequisite, fifteen hours of psychology. Mr. Goddard, Mr. Maxfield and assistants.

Descriptive and practical laboratory study of standardized diagnostic mental tests. Intensive laboratory training in the application of mental tests for individual examination, with special reference to performance tests.

619. Advanced Psychological Clinic. Two or four credit hours. One Quarter. Autumn, Winter, Spring. Two laboratory periods each week. Lectures, reports, laboratory, and individual case studies. Prerequisites, Psychology 617 and 618, or permission of the instructor. May be taken for one or two Quarters with a maximum credit of four hours. Mr. Goddard, Mr. Maxfield, and assistants.

Theory and practice of mental diagnosis. Descriptive and practical study of the clinical syllabus and case-taking, including family history, personal history, school history, social history, etc. Combination mental diagnosis based on the application and interpretation of various mental tests for general intelligence, special ability, disability, etc. Training in the preparation of clinical reports.

NOTE: A student may profitably receive the special training which this course gives for a second Quarter. Repetition does not involve repetition of content but additional practice in clinical diagnosis.

620. Practicum in Mental Diagnosis. Two credit hours. One Quarter. Autumn, Winter, Spring. Assignments equivalent to two laboratory periods each week. Prerequisite, Psychology 619 or permission of the instructor (students are advised to consult instructor before registering). May be taken for one or two Quarters with a maximum credit of four hours. Mr. Goddard, Mr. Maxfield, and assistants.

Applied clinical diagnosis. Students will engage in actual diagnostic service, under the supervision of the instructor. Cases will be studied in the laboratory and in the nearby public schools and institutions. Special training in the diagnosis of borderline, psychopathic, and doubtful cases. Advanced training in the preparation of clinical reports.

NOTE: A student may profitably receive the special training which this course gives for a second Quarter. Repetition does not involve repetition of content but additional practice in clinical diagnosis.

621. Social Psychology. Three credit hours. Winter Quarter. Three lecture hours each week. Prerequisite, Psychology 401-402 or 407. Mr. Arps.

The nature and variety of innate tendencies; the relation of these tendencies to acquired behavior and social control; the development of personality.

622. The Psychology of the Delinquent Child. Three credit hours. Spring Quarter. Three lecture hours each week. Lectures, reports, and

visits to the Bureau of Juvenile Research. Prerequisite, fifteen hours of psychology or ten hours of psychology and five hours of professional educational subjects or sociology. Mr. Goddard.

The relation of mental deficiency to social maladjustment. Treatment of problems of mental abnormality arising in clinical work, in juvenile courts, institutions for delinquents, and in the work of probation officers, attendance supervisors, visiting teachers, and social workers.

***623. Folk Psychology.** Three credit hours. Autumn Quarter. Three lectures each week. Prerequisite, Psychology 401-402.

A consideration of the psychological factors involved in the various forms of group behavior.

***624. Psychology of Vision.** Five credit hours. Spring Quarter. Three lectures each week. Given biennially. Prerequisites, Psychology 602, and Physics 402 or its equivalent. Qualified Juniors and Seniors in Electrical Engineering and Architecture may be admitted by permission of the instructor. Mr. Williams.

Production, measurement, and control of photic stimuli and measurements of the variations in their effectiveness as determined by physical and physiological factors. The work will consist in part of lecture-demonstrations and experiments, and in part of a critical study of the reports of original authors. Special attention will be given to the facts and hypotheses of color-vision and to visual problems in industry.

626. Problems in Learning and Thinking. Three credit hours. Winter Quarter. Three lecture and discussion hours each week. Prerequisite, Psychology 402 or its equivalent. Mr. Renshaw.

The development of the principles which underlie the acquired modifications of human behavior, from associationism to the present time.

628. The Learning Process. Three credit hours. Spring Quarter. Three lectures each week. Lectures, readings in monographs and journals, discussions. Prerequisite, Psychology 407. Mr. Pressey.

An advanced course in educational psychology, dealing with certain especially important problems in the field, such as the control of the learning process, memory and forgetting, transfer of training, fatigue, with emphasis upon the more elaborate types of learning such as are seen in school work. Especial attention will be paid to recent experimentation and theories concerning the learning process.

629. Advanced Psychology. Five credit hours. Autumn Quarter. Five lectures each week. Prerequisite, Psychology 401-402. Miss Rogers.

The purpose of this course is to give a larger background to the advanced student of psychology, with respect to the development of psychology as a science, emphasizing the relations of psychology to other disciplines, especially the sciences, and with respect to the evolutions of some of its fundamental concepts, as consciousness and behaviorism.

630. Psychology of Feeling and Emotion. Five credit hours. Winter Quarter. Five lectures each week. Prerequisite, Psychology 401-402. Miss Rogers.

A study of the various theories of feeling and emotion and the fundamental relations of emotion to instincts. The relations between these subjects and social behavior will be emphasized.

***631. Theory of Intelligence.** Three credit hours. Winter Quarter. Three lecture hours each week. Prerequisite, fifteen hours of psychology or ten hours of psychology and five hours of professional educa-

* Not given in 1928-1929.

tional subjects. Open only to Seniors and graduate students. Mr. Maxfield.

Nature of intelligence, current and historical concepts. Psychology of intelligence; physical and physiological correlates. Distribution and growth of intelligence. Critical study of the "Intelligence Quotient." Mental age, mental level, mental type, mental function.

634. Criminal and Legal Psychology. Five credit hours. Winter Quarter. Five lectures each week. Prerequisite, Psychology 401-402. Mr. Burtt.

Psychological factors in the determination of reliability of testimony; the technique of detecting crime and falsehood; responsibility; the relation of crime to mental disease or defect; the prevention of crime through environmental factors and heredity.

635. Psychology of Advertising. Three credit hours. One Quarter. Autumn and Spring. Three lectures each week. Prerequisite, Psychology 401-402. Mr. Burtt.

The psychological principles involved in effective advertising, notably attention, memory and action, with the contributory factors of association, feeling, instinct, suggestion, and reasoning.

636. Advertising Psychology Laboratory. Three credit hours. Winter Quarter. Six laboratory hours each week. Prerequisite, Psychology 635. Mr. Burtt.

General and special problems illustrating the application of laboratory methods and the treatment and use of experimental data in the field of advertising psychology.

637. Industrial Psychology. Three credit hours. Autumn Quarter. Three lectures each week. Prerequisite, Psychology 401-402. Mr. Burtt.

The application of psychology to problems of industrial learning, adjustment of technical to mental factors, monotony, fatigue, environmental conditions, industrial unrest and morale.

638. Industrial and Vocational Psychology Laboratory. Three credit hours. Spring Quarter. Two three-hour laboratory periods each week. Prerequisite, permission of the instructor. Mr. Burtt.

Laboratory work in the application of psychology to industrial and vocational problems, with especial emphasis on the development of psychological techniques for hiring employees. Practice in the devising and standardizing of occupational tests; obtaining and evaluating production ratings; correlation of ratings and tests; interpretation of results from the standpoint of vocational selection or guidance. A portion of the work of the course is frequently done in local business and industrial plants.

639. Psychology and Personnel. Three credit hours. Winter Quarter. Three lectures each week. Prerequisite, Psychology 401-402. Mr. Burtt.

The application of psychology to problems of personnel. Selection and placement of employees by tests of intelligence and special ability. Trade tests, job analysis, and rating scales.

This course is not open to students who have taken Psychology 637 prior to 1923-1924.

640. Educational and Vocational Guidance. Three credit hours. Winter Quarter. Prerequisite, Psychology 407. Mr. Toops.

A course dealing with the technique of evaluating psychological and related factors as a basis for making educational and vocational recommendations to individuals. The place of vocational and educational tests, previous record, and personality traits in determination of choice of occupation or course of study.

This course is not open to students who have credit for Psychology 417.

641. Abnormal Psychology. Five credit hours. Winter Quarter. Five lectures each week. Lectures, recitations, and clinics. Prerequisite, Psychology 401-402. Mr. Goddard.

The abnormal mental phenomena—viz., disorders of perception, association, memory, affection, judgment, action, volition, and personality, with especial emphasis on their relation to the respective normal phenomena. The grouping of these disorders into the syndromes exhibited in the main types of insanity.

642. Psychopathology. Three credit hours. Spring Quarter. Three lectures each week. Lectures, recitations, and reports. Prerequisite, Psychology 641. Mr. Goddard.

This course will deal with the unusual (so-called pathological) manifestations of mind. Beginning with a consideration of subconscious phenomena—sleep, dreams, hypnosis, automatic writing, etc., there will be discussed: phobias, suggestion, the psychological aspects of hysteria, and multiple personality, psychasthenia, neurasthenia, and other disorders of personality.

644. Human Motives and Incentives. Three credit hours. Spring Quarter. Three hours each week. Lectures, recitations, and assigned readings. Prerequisite, Psychology 401-402 or 407. Mr. Toops.

The psychological bases of initiation and improvement of work. The role of instinct, habit, custom and tradition, rationalization and psychopathy in motivation. The incentive values of self-ratings, competition, punishment, and such rewards as money, bonuses, participation and promotion, in relation to the capacities of individuals.

645. History of Psychology. Five credit hours. Autumn Quarter. Five lectures each week. Prerequisites, Psychology 629 and 630 or permission of instructor. Mr. Williams.

The course aims to view modern psychological problems in the light of their historical antecedents. The development of various theories such as those of sensation, attention, space perception, and emotion will be traced from earliest times to the present. As far as possible assignments will involve reference to original sources.

646. Principles of Human Behavior. Three credit hours. Spring Quarter. Three lectures each week. Prerequisite, sixteen hours in psychology. Mr. Weiss.

A study of the development of theories of human behavior and a consideration of the simplest assumptions necessary and sufficient to explain the facts of human behavior as dependent on social and biological conditions.

647. Theoretical Psychology. Three credit hours. Autumn Quarter. Three lectures each week. Prerequisite, sixteen hours in psychology. Mr. Weiss.

Lectures and assigned readings bearing on the evolution of psychological theory in its relation to the physical and the social sciences.

***648. Psychology of Language.** Three credit hours. Three lectures each week. Prerequisite, Psychology 401-402.

The nature of the speech reaction, the development of speech in the child, the types of linguistic categories, and the psychological factors in linguistic change.

This course is not open to students who have credit for Psychology 633.

***649. Psychology of Language Laboratory.** Two credit hours. Spring Quarter. Four laboratory hours each week. Prerequisite, Psychology 648.

A training course in the use of apparatus and methods for the experimental investigation of language behavior.

* Not given in 1928-1929.

650. Minor Problems. One or more credit hours. All Quarters. Prerequisite, sixteen hours in psychology. All instructors.

Investigation of minor problems in the various fields of psychology.

By permission of the head of the department and the Director of the Bureau of Educational Research, students enrolled in this course may obtain credit for research work done under the auspices of the Bureau staff.

651. Psychology of the Elementary School Subjects. Three credit hours. Autumn Quarter. Three lectures each week. Prerequisite, Psychology 407. Mrs. Pressey.

An analysis of the specific psychological processes involved in arithmetic, reading, writing, and other elementary school subjects, with consideration of the conditions which promote learning in each subject, and examination of textbooks and methods from this point of view.

This course is not open to students who have credit for Psychology 410.

652. Psychology of High School Subjects. Three credit hours. Winter Quarter. Three lectures each week. Prerequisite, Psychology 407. Mr. Pressey.

An analysis of the specific psychological processes involved in algebra, language, science, and other high school subjects, with consideration of the conditions which promote learning in each subject, and examination of textbooks and methods from this point of view.

This course is not open to students who have credit for Psychology 410.

***653. Special Response Categories.** Three credit hours. Autumn Quarter. Three lectures each week. Prerequisite, Psychology 646. Mr. Weiss.

An analysis of the more complex forms of human behavior. A continuation of Psychology 646.

654. Advanced Statistics. Three credit hours. Spring Quarter. Two lectures and one two-hour laboratory period each week. Prerequisite, Psychology 612 or School Administration 644 or equivalent. Mr. Toops.

Special cases in correlation; non-linear regression; straight lines of best fit construction of criteria; elementary probability; random sampling; derivation of commonly used equations; critical readings; construction of tables and graphs to meet the research needs of individual students.

655. Comparative Psychology. Three credit hours. Autumn Quarter. Three lectures each week. Prerequisite, Psychology 401-402. Mr. Williams.

The principles of animal behavior in relation to human behavior. A study of the similarities and differences in the behavior of animals and of humans and the explanation of these similarities and differences, with special reference to those principles definitely involved in the organism's instinctive and acquired mode of adjusting to its environment.

656. Comparative Psychology. Three credit hours. Spring Quarter. Three lectures each week. Prerequisite, Psychology 655. Mr. Williams.

A continuation of Psychology 655.

This course is not open to students who have credit for Psychology 627.

* Not given in 1928-1929.

657. Comparative Psychology Laboratory. Three credit hours. Autumn Quarter. One lecture each week and laboratory periods to be arranged. Prerequisite, Psychology 401-402. Mr. Williams.

The methods and results of investigation of animal behavior in relation to human behavior.

658. Comparative Psychology Laboratory. Three credit hours. Spring Quarter. One lecture each week and laboratory periods to be arranged. Prerequisite, Psychology 657. Mr. Williams.

A continuation of Psychology 657.

659. University Personnel Psychology. Three credit hours. Autumn Quarter. Two three-hour laboratory periods each week. Prerequisite, ten hours of psychology. Mr. Toops.

A course designed for students who are preparing for positions in vocational guidance or personnel work in universities and those interested in the achievement of adults. The giving, scoring, and interpretation of tests of university entrants.

Reading tests and tests of special capacities of adults. Planning a testing program for adults. Theories of adult testing. The content of the course will vary somewhat from year to year.

662. The Elementary and Pre-School Child. Three credit hours. Winter Quarter. Two lectures and one hour conference each week. Prerequisite, Psychology 407 or 402. Mrs. Pressey.

This course will present the elements of child nature, individual differences and development in children from infancy until adolescence. The course will be especially adapted to the needs of teachers and of others who have constant contact with children.

†665. Psychological Problems of Deans of Women. Three credit hours. Prerequisite, Psychology 401-402 or 407. Mrs. Gaw.

This course should be of interest to Deans of Women in Colleges and Universities, Deans of Girls, Vice-Principals of High Schools and other counselors of girls.

The following topics will be considered: scholastic and social orientation of students; giving advice on how to study and budgeting of time and money; assembling of vocational information and giving of vocational advice; use and interpretation of records of entrance examinations and scholarship for the dean's office; methods of consultation on the basis of such records.

701. Proseminary in Educational Psychology. Two credit hours. Autumn Quarter. One two-hour discussion each week. Prerequisites, Psychology 407 and permission of the instructor. Only school people in active service will be admitted. Mrs. Pressey.

This course is offered exclusively for teachers in service. It will consist of lectures and readings upon one or more topics of importance in educational psychology. These topics will vary from year to year according to the needs of the group. Each teacher will be expected to work out some minor problem having to do with the main topic of the course.

FOR GRADUATES

An undergraduate student shall not be permitted to take any course in the "800" group except by permission of the Graduate Council.

801. Major Research.

802. Seminar in General Psychology.

803. Seminar in Educational Psychology.

805. Contemporary Psychological Literature.

† Not given during the academic year 1928-1929.

- 806. Seminar in Abnormal Psychology.
- 807. Seminar in Industrial Psychology.
- 808. Psycho-Analysis.
- 810. Psychological Problems in Higher Education.

For description of graduate courses in this department see the Bulletin of the Graduate School.

PUBLIC HEALTH

Office, Hamilton Hall

PROFESSOR HAYHURST, ASSISTANT PROFESSOR SELBERT

403. Child Health. Two credit hours. Autumn Quarter. One lecture and one demonstration each week. Elective. Education-Science Nursing, third year. Mrs. Selbert.

The principles of child welfare are considered including ante-natal, neo-natal, and post-natal periods of infancy; the pre-school and school age through early adolescent life. Disease conditions are not considered.

404. Principles of Public Health Nursing. Three credit hours. One Quarter. Autumn and Spring. Three recitations each week. Education-Science Nursing, first year. Mrs. Selbert.

The organization of public health nursing and the place of nursing in its relation to the various forms of medical, social, and public service. The best methods of administration as to the supervision and arrangement of practical work, classification and preservation of records and the presentation and publication of reports. This course is intended also to give a general grasp of measures to be followed outside of hospital nursing in various types of sickness, to relieve immediate needs and to teach hygiene and methods to prevent the spread of disease. Special branches of public health nursing are considered and the practical handling of individual problems is discussed.

406. Survey of Nursing. One credit hour. Spring Quarter. One lecture each week. Education-Science Nursing, first year. Mrs. Selbert.

A study of the development of nursing, its status in ancient times, and the ideals of modern nursing.

407. Elementary Nursing. Two credit hours. One Quarter. Autumn, Winter, Spring. Two lectures with demonstration each week. Education-Science Nursing, first year. Home Economics, fourth year. Three sections, each limited to twenty-five students. Mrs. Selbert.

Instruction in the fundamental principles on which nursing depends. The demonstration and practice of those nursing duties which may be performed in the earlier stages of training in the hospital and in home nursing.

- 452-453. Public Health Nursing Field Work. Two credit hours. Two Quarters. Both 452 and 453 are given Autumn, Winter, Spring. Six hours of field work each week. Elective in five-year curricula in Nursing after the third year. Prerequisite, consent of the instructor. Mrs. Selbert and field workers.

A study is made of the medical and nursing service in various schools. The time and assignments for each student are arranged individually by the instructor.

454. Public Health Nursing Field Work, including Social Case Work. Thirteen credit hours. One Quarter. Autumn, Winter, Spring. Thirty-nine hours of field work each week. Elective in five-year cur-

ricula in Nursing after the third year. Prerequisite, Public Health 452-453. Mrs. Selbert and field workers.

Observation and experience with various nursing and social service organizations. Hospital and dispensary social service. The time and assignments for each student are arranged individually by the instructor.

FOR ADVANCED UNDERGRADUATES AND GRADUATES

According to the University regulations, courses in this group are not open to Freshmen and Sophomores.

601. Personal Hygiene. Three or five credit hours. Winter Quarter. Three lectures or recitations each week; also two conferences when five credit hours are elected. Prerequisite, first two years of course preliminary to Medicine or five credit hours in college biological science. A previous course in chemistry is recommended. Mr. Hayhurst.

This course aims, in a somewhat technical manner, to point out the principles for maintaining personal health and efficiency.

602. Public Health Problems. Three or five credit hours. One Quarter. Autumn, Winter, Spring. Three lectures or recitations each week; also one conference and three field hours when five credit hours are elected. Prerequisite, first two years of course preliminary to Medicine or five credit hours in college biological science. A previous course in chemistry and physics is recommended. Mr. Hayhurst, Mrs. Selbert.

A resume of theories and discoveries pertaining to the causes and prevention of disease. An elementary consideration of the public health aspects of such problems as food, supplies, milk, water, sewage and refuse disposal, air and ventilation, communicable diseases, quarantine, maternity and infant welfare, housing and school hygiene, camp and rural sanitation, public service hygiene, tuberculosis, cancer, nostrums and quackery, mental and industrial hygiene, vital statistics, health education and health administration.

603. Industrial Hygiene. Three or five credit hours. One Quarter. Autumn, Winter, Spring. Three lectures or demonstrations each week; also one conference and three field hours when five credit hours are elected. Prerequisite, first two years of course preliminary to Medicine or five credit hours in college biological science, or a background in economics or sociology or industrial engineering. Mr. Hayhurst.

This course considers the hygiene of work and as such deals with the principles which underlie working efficiency, maximum production and the avoidance of loss of time due to ill-health. The course consists of didactic work, lecture and demonstrations covering the various health hazards which exist in connection with occupations, such as fatigue, inactivity, industrial infections, dust, faulty air-conditions and illumination, temperature extremes, poisons, abnormal atmospheric pressures, electrical hazards, etc. The methods of control, including governmental supervision, organization of industrial health services, physical examinations, the occupational diseases and compensation matters are included.

SCIENCE NURSING

501. Hospital Ward Duty, Drugs and Solutions. Eight to twelve credit hours. One Quarter. Summer, Autumn, Winter, Spring. One hour's lecture each week included in six hours of hospital ward duty each day for six days each week. Education-Science Nursing, first year. Prerequisite, first three Quarters of the curriculum in Science Nursing or its equivalent. Staff of University Hospital.

The student serves as a probationer in the wards of the University Hospital, and receives elementary instruction in the handling of drugs and solutions.

502. Hospital Ward Duty. Eight credit hours. One Quarter. Autumn, Winter, Spring. Four hours of hospital ward duty each day for six days each week. Education-Science Nursing, first year. Prerequisite, Science Nursing 501. Staff of University Hospital.

The student performs the duties of a nurse in training in the wards of the University Hospital.

503. Hospital Ward Duty. Sixteen credit hours. One Quarter. Summer, Autumn, Winter, Spring. Eight hours each day for six days each week. Education-Science Nursing, second year. Prerequisite, Science Nursing 502. Staff of University Hospital.

The student performs the duties of a nurse in training in the wards of the University Hospital.

504. Elementary Pathology. One credit hour. Winter Quarter. One lecture each week. Education-Science Nursing, third year. Prerequisite, first two years of the curriculum in Science Nursing and Science Nursing 503. Dr. Scott and assistants.

A lecture course covering the elementary principles; retrogressive, inflammatory, and regenerative reactions of the tissues and the effects of special infectious agents upon the body; tumors.

505. Medical Nursing and Materia Medica. Four credit hours. Winter Quarter. Four lectures and demonstrations each week. Education-Science Nursing, third year. Prerequisite, first two years of the curriculum in Science Nursing and Science Nursing 503. Dr. Smith and assistants.

Hygiene of the sick room; diseases of the blood, of organs of circulation and lymphatics, of organs of respiration, of digestion, and of excretion. Drugs, systems of measurement, the care and use of equipment, administration, solutions; important drugs; the medicine closet.

506. Surgical Nursing and Operating Room Technique. Four credit hours. Winter Quarter. Four lectures and demonstrations each week. Education-Science Nursing, third year. Prerequisite, first two years of the curriculum in Science Nursing and Science Nursing 503. Staff of University Hospital.

Principles of septic and antiseptic surgery; fractures; surgical emergencies; pre-operative considerations; post-operative considerations; surgical tuberculosis; tumors; surgical conditions of the head, neck, chest, stomach, gall bladder, intestines, kidney and bladder, and fistulae and plastic surgery. The operating room; instruments and supplies; preparations for operation; local preparation of patient for operation; and preparation and duties of the nurse.

507. Hospital Ward Duty. Eight credit hours. One Quarter. Autumn, Winter, Spring. Four hours each day for six days each week. Education-Science Nursing, third year. Prerequisite, Science Nursing 503. Staff of University Hospital.

The student performs the duties of a nurse in training in the wards of the University Hospital.

508. Hospital Ward Duty. Sixteen credit hours. One Quarter. Summer, Autumn, Winter, Spring. Eight hours each day for six days each week. Education-Science Nursing, third year. Prerequisite, Science Nursing 507. Staff of University Hospital.

The student performs the duties of a nurse in training in the wards of the University Hospital.

509. Gynecological and Obstetrical Nursing. Three credit hours. Autumn Quarter. Three lectures each week. Education-Science Nursing, fourth year. Prerequisite, first three years of the curriculum in Science Nursing and Science Nursing 508. Staff of University Hospital.

Definition and brief history of gynecology; diseases of the reproductive organs and genito-urinary tract; examinations and gynecological operations. Mechanism and management of normal labor; after-care of the mother; care and artificial feeding of the new-born infant; physiology and hygiene of pregnancy; pathological pregnancy.

510. Orthopedic and Child Nursing. Three credit hours. Autumn Quarter. Three lectures each week. Education-Science Nursing, fourth year. Prerequisite, first three years of the curriculum in Science Nursing and Science Nursing 508. Staff of University Hospital.

Definition; deformities; apparatus used in orthopedic work; care of patients in plaster casts and braces; orthopedic operations. The normal child; nursing of sick children; diseases of digestive, respiratory, circulatory, nervous and genito-urinary systems; diseases of the blood and lymphatic glands; surgical conditions in children; social aspects of children's diseases.

511. Communicable Diseases and Special Senses Nursing. Three credit hours. Autumn Quarter. Three lectures each week. Education-Science Nursing, fourth year. Prerequisite, first three years of the curriculum in Science Nursing and Science Nursing 508. Staff of University Hospital.

The nursing conduct of cases of special diseases; methods of examination; methods of treatment.

512. Hospital Ward Duty. Eight credit hours. One Quarter. Autumn, Winter, Spring. Four hours each day for six days each week. Education-Science Nursing, fourth year. Prerequisites, first three years of the curriculum in Science Nursing and Science Nursing 508. Staff of University Hospital.

The student performs the duties of a nurse in training in the wards of the University Hospital.

513. Hospital Ward Duty. Eight credit hours. One Quarter. Autumn, Winter, Spring. Four hours each day for six days each week. Education-Science Nursing, fourth year. Prerequisite, first three years of the curriculum in Science Nursing and Science Nursing 512. Staff of University Hospital.

The student performs the duties of a nurse in training in the wards of the University Hospital.

514. Hospital Ward Duty. Sixteen credit hours. One Quarter. Summer, Autumn, Winter, Spring. Eight hours each day for six days each week. Education-Science Nursing, fourth year. Prerequisite, Science Nursing 513. Staff of University Hospital.

The student performs the duties of a nurse in training in the wards of the University Hospital.

NOTE: For Principles of Education 770, the Teaching of Nursing, three credit hours, Spring Quarter, see page 186.

RHETORIC AND ENGLISH LANGUAGE

(See English)

ROMANCE LANGUAGES AND LITERATURES

Office, 104 Hayes Hall

PROFESSORS HENDRIX, MOORE, HAVENS, AND ROCKWOOD, ASSISTANT
 PROFESSORS HAMILTON, GUTIERREZ, FOURE, ANIBAL, G. O. RUSSELL
 AND SCHUTZ, MISS SCHONS, MRS. ARTHUR, MRS. FOURE,
 MISS WALSH, MR. DONAN, MR. H. J. RUSSELL, AND
 DEPARTMENT ASSISTANTS

French 401-402, 403-404 must precede all other courses in French except 405-406. The undergraduate courses offered in French and Spanish beginning with third-year collegiate work fall into two general groups:

I. Literary—French 413-414, 601-602, 605, 607-608, 609-610, 611-612, 613-614; Spanish 413-414, 607-608, 609-610, 611-612, 613-614, 615-616.

II. Linguistic—French 410, 413-414, 623-624, 625-626, 627-628; Spanish 413-414, 605-606. Students may emphasize one or both of these lines of study.

For students who enter with two years of high-school French the following outline course is recommended:

First Year: French 403-404.

Second Year: (1) French 413-414.

(2) French 410.

Third and Fourth Years: (1) French 601-602, 605, 607-608, 609-610, 611-612, 613-614.

(2) French 623-624, 625-626, 627, 628, and Principles of Education 740 (Teaching of French).

For students who enter with two years of high-school Spanish the following outline course is recommended:

First Year: Spanish 403-404.

Second Year: Spanish 413-414.

Third and Fourth Years: Spanish 605-606, 607-608, 609-610, 611-612, 613-614, 615-616, 617, 619, 620, and Principles of Education 745 (Teaching of Spanish).

To receive a departmental recommendation as a teacher of French, the student must have taken French 401-402, 403-404, 413-414, 601-602, 603-604, 627, 628, and Principles of Education 740 (Teaching of French), or their equivalent.

To receive a departmental recommendation as a teacher of Spanish, the student must have taken Spanish 401-402, 403-404, 413-414 or their equivalent; and, in addition to one advanced course, 620, 617, and Principles of Education 745 (Teaching of Spanish).

THE FRENCH CLUB

The French Club is a student organization conducted by the department and is under the supervision of Mr. and Mrs. Fouré. Formal meetings are held fortnightly. It has been the practice of the French Club to stage one or more French plays annually for the last twenty years.

THE SPANISH CLUB

The Spanish Club is a student organization conducted by the department and is under the supervision of Mr. Gutierrez. The club presents one or two plays each year.

FRENCH

401. Elementary French. Five credit hours. One Quarter. Autumn, Winter, Spring. Five recitations each week. Sections in this course are limited to thirty-five students. All instructors.

Grammar and prose.

No student is allowed to take this course simultaneously with Spanish 401-402 or Italian 401-402.

402. Elementary French (Continued). Five credit hours. One Quarter. Autumn, Winter, Spring. Five recitations each week. Pre-

requisite, French 401. Sections in this course are limited to thirty-five students. All instructors.

Grammar and prose.

No student is allowed to take this course simultaneously with Spanish 401-402 or Italian 401-402.

403. Intermediate French. Five credit hours. One Quarter. Autumn, Winter, Spring. Five recitations each week. Prerequisite, French 402 or equivalent. Sections in this course are limited to thirty-five students. All instructors.

404. Intermediate French (Continued). Five credit hours. One Quarter. Autumn, Winter, Spring. Five recitations each week. Prerequisite, French 403 or equivalent. Sections in this course are limited to thirty-five students. All instructors.

405. Elementary Course in the Reading of French. Five credit hours. One Quarter. Autumn and Spring. Five recitations each week. Sections in this course are limited to thirty students. Prerequisite, previous training in some foreign language. Not open to Freshmen or Sophomores. Not open to students in the Colleges of Liberal Arts, Commerce and Administration, and Education who intend to make language or literatures their major or minor. It is not accepted as a prerequisite for any course in the department except French 406. All instructors.

This course is designed primarily for graduate students and upper classmen desiring to concentrate on acquiring a reading knowledge of French.

Instruction will be based on the assumption that the members of the class have not had previous training in French.

406. Elementary Course in the Reading of French (Continued). Five credit hours. Winter Quarter. Five recitations each week. Prerequisite, French 405. Not open to students in the Colleges of Liberal Arts, Commerce and Administration, and Education who intend to make language or literatures their major or minor. It is not accepted as a prerequisite for any other course in the department. All instructors.

Grammar sufficient for graduate students and others desiring to concentrate on acquiring a reading knowledge of French.

This is a beginning course and is not open to students who have completed any course in French other than 405.

410. Elementary French Conversation and Composition. Five credit hours. One Quarter. Autumn, Winter, Spring. Five recitations each week. Prerequisites, French 404 with grade of "C" or better, and permission of the instructor. This course is conducted in French. Sections are limited to twenty students. Mr. Fouré, Mrs. Fouré, Miss Hier.

This course is not open to students who have credit for French 621.

413. Advanced French. Five credit hours. One Quarter. Autumn, Winter, Spring. Five recitations each week. Prerequisite, French 404 with grade not lower than "C."

Rapid reading of modern literature with special emphasis on the nineteenth century.

This course is not open to students who have credit for French 603.

414. Advanced French. Five credit hours. One Quarter. Autumn, Winter, Spring. Five recitations each week. Prerequisite, French 413.

Rapid reading of modern literature with special emphasis on the nineteenth century.

This course is not open to students who have credit for French 604.

FOR ADVANCED UNDERGRADUATES AND GRADUATES

Students intending to major or minor in French are urged to elect the following courses outside of the department: English 805, History 624-625, Greek 701 and Philosophy 601-602.

Students in the College of Education are required to take in addition French 627-628.

According to the University regulations, courses in this group are not open to Freshmen and Sophomores.

601. French Literature of the Seventeenth Century, 1600-1660. Five credit hours. Winter Quarter. Five lectures each week. Lectures, collateral reading, and reports. Prerequisite, French 413-414. Mr. Rockwood.

The principal literary movements of the age: formation of the school of 1660, The Libertines, growth of French comedy and tragedy, The Précieuses, the French Academy will be discussed. Selected works of Malherbe, De Vau, Descartes, Balzac, and Corneille will be read.

602. French Literature of the Seventeenth Century, 1660-1700. Five credit hours. Autumn Quarter. Five lectures each week. Lectures, collateral reading, and reports. Prerequisite, French 413-414. Mr. Rockwood.

The school of 1660. Quarrel of the Ancients and the Moderns. Selected works of Molière, Racine, Pascal, La Bruyère, La Fontaine, La Rochefoucauld will be read.

605. French Literature of the Fifteenth and Sixteenth Centuries. Three credit hours. Spring Quarter. Three lectures each week. Given biennially. Prerequisite, French 413-414. Mr. Moore.

Villon, Rabelais and Montaigne.

***607. French Literature of the Eighteenth Century, 1700-1750.** Three credit hours. Winter Quarter. Three lectures each week. Prerequisite, French 413-414. Mr. Havens.

Rapid reading, with lectures and reports. Fontenelle, Bayle, Crébillon, Voltaire, Montesquieu, Marivaux and others.

***608. French Literature of the Eighteenth Century, 1750-1789.** Three credit hours. Spring Quarter. Three lectures each week. Prerequisite, French 413-414. Mr. Havens.

Rapid reading, with lectures and reports. Voltaire, Rousseau, Diderot, Beaumarchais, and others.

***609. The French Novel to 1850.** Three credit hours. Autumn Quarter. Three lectures each week. Given biennially, alternating with French 611-612. Prerequisite, French 413-414. Mr. Havens.

Rapid survey of the French novel during the sixteenth, seventeenth, and eighteenth centuries and the first half of the nineteenth century. Mme. de Staël, Chateaubriand, George Sand, Hugo, and Balzac. Lectures, reports, and collateral reading.

***610. The French Novel, 1850 to the Present Day.** Three credit hours. Winter Quarter. Three lectures each week. Given biennially, alternating with French 611-612. Prerequisite, French 413-414. Mr. Havens.

Flaubert, Maupassant, Zola, Daudet, France, Bazin, Loti, and others. Lectures, reports, and collateral reading.

* Not given in 1928-1929.

611. The Comedy of Manners in the Nineteenth Century, 1800-1880. Three credit hours. Autumn Quarter. Three lectures each week. Given biennially, alternating with French 609-610. Prerequisite, French 413-414. Mr. Rockwood.

La Pièce à Thèse, La Pièce Bien Faite, Dumas fils, Augier, Scribe, Sardou. Rapid reading with lectures and reports.

612. The Comedy of Manners in the Nineteenth Century, 1880-1922. Three credit hours. Winter Quarter. Three lectures each week. Given biennially, alternating with French 609-610. Prerequisite, French 413-414. Mr. Rockwood.

Le Theatre Libre, Becque, Curot, Hervieu, Lavedan, Donnay, Bernstein, Bataille, Guitry. Rapid reading with lectures and reports.

613. History of French Literature, 942-1660. Three credit hours. Winter Quarter. Three lectures each week. Prerequisites, French 410 and at least one "600" course in French literature. Given biennially, alternating with French 625-626. This course is conducted in French. Mr. Fouré.

614. History of French Literature, 1660-1922. Three credit hours. Spring Quarter. Three lectures each week. Prerequisites, French 410 and at least one "600" course in French literature. Given biennially, alternating with French 625-626. This course is conducted in French. Mr. Fouré.

615. French Lyric Poetry. Three credit hours. Spring Quarter. Prerequisite, French 413-414. Mr. Hamilton.

A detailed study of French poetry, particularly of the Nineteenth Century.

623. Cours de Style. Three credit hours. One Quarter. Autumn and Winter. Three recitations each week. Prerequisites, French 410, 413-414, and permission of the instructor. This course is conducted in French. It is limited to twenty students. Mr. Fouré.

624. Cours de Style (Continued). Three credit hours. One Quarter. Winter and Spring. Three recitations each week. Prerequisites, French 623 and permission of the instructor. This course is conducted in French. It is limited to twenty students. Mr. Fouré.

***625. Explication de Textes.** Three credit hours. Winter Quarter. Three recitations each week. Given biennially, alternating with French 613-614. Prerequisites, French 623, 624, and a "600" course in French literature. This course is conducted in French. Mr. Fouré.

The course aims to introduce the student to a method of literary appreciation based upon a critical study of well selected texts representing the main characteristics of each writer. Examples will be taken from seventeenth and eighteenth century authors.

***626. Explication de Textes (Continued).** Three credit hours. Spring Quarter. Three recitations each week. Given biennially, alternating with French 613-614. Prerequisites, French 623, 624, and a "600" course in French literature. This course is conducted in French. Mr. Fouré.

Selections from the nineteenth century and contemporary authors.

* Not given in 1928-1929.

627. French Phonetics. Three credit hours. One Quarter. Autumn and Winter. Prerequisites, six Quarters of collegiate French or the equivalent with a grade not less than "C," Junior standing, the consent of the department, and permission of the instructor. Required of all students desiring the department recommendation as a teacher of French. The class is limited to twelve. Mr. Rockwood.

The formation of French sounds. Lectures, with exercises in the use of the symbols of the International Phonetic Association. A systematic study of the rules of French pronunciation. Careful drill in the reading of French. Designed for advanced students who expect to teach French.

628. Review of French Syntax. Three credit hours. Autumn Quarter. Open to Seniors and graduate students who have had six Quarters of collegiate French or the equivalent, with a grade not less than "C." Mr. Schutz.

A careful elucidation of French grammar, with composition to illustrate. Designed for advanced students who expect to teach French.

705-706-707. Honors Course in French. Three to five credit hours. Autumn, Winter, Spring Quarters. Work in conference, library or phonetics laboratory. Prerequisites, Senior standing, with the record of "A" in at least half of the French courses and an average of "B" in the remainder, and the approval of the department.

This course is intended to give undergraduates of special aptitude a greater opportunity to do independent study than is possible in the ordinary course.

NOTE: TEACHING COURSES. For the Teaching Course in this department see the Department of Principles of Education, Course 740.

ITALIAN

401. Elementary Italian. Five credit hours. Autumn Quarter. Five recitations each week. Mr. Moore.

Grandgent's Italian Grammar.

This course may not be taken simultaneously with French 401-402 or Spanish 401-402.

402. Elementary Italian (Continued). Five credit hours. Winter Quarter. Five recitations each week. Prerequisite, Italian 401. Mr. Moore.

Grandgent's Italian Grammar. Modern Italian prose.

This course may not be taken simultaneously with French 401-402 or Spanish 401-402.

FOR ADVANCED UNDERGRADUATES AND GRADUATES

According to the University regulations, courses in this group are not open to Freshmen and Sophomores.

601. Modern Italian Literature, 1800-1850. Five credit hours. Spring Quarter. Five recitations each week. Prerequisite, Italian 402. Mr. Moore.

Foscolo, Manzoni, Pellico, Leopardi.

602. Modern Italian Literature, 1851-1900. Five credit hours. Autumn Quarter. Five recitations each week. Prerequisite, Italian 402. Mr. Moore.

Rovetta, Carducci, Giacosa, Fogazzaro.

607. Italian Literature of the Renaissance. Three credit hours. Autumn Quarter. Three recitations each week. Given biennially, alternating with Italian 611. Prerequisite, Italian 602 or the permission of the instructor. Mr. Moore.

Boiardo, Ariosto, Pulci, Machiavelli. Lectures, collateral reading, and reports.

***608. Italian Literature of the Renaissance (Continued).** Three credit hours. Winter Quarter. Three recitations each week. Given biennially, alternating with Italian 612. Prerequisite, Italian 602 or the permission of the instructor. Mr. Moore.

Bandello, Il Lasca, Castiglione, Cellini, Tasso. Lectures, collateral reading, and reports.

609. Survey of Italian Literature to 1400. Three credit hours. Winter Quarter. Three lectures each week. No prerequisites, and no knowledge of a foreign language required. Mr. Moore.

English translations of Dante, Petrarch, Boccaccio. Lectures, readings, and reports will be in English.

610. Survey of Italian Literature, 1400-1900. Three credit hours. Spring Quarter. Three lectures each week. No prerequisites, and no knowledge of a foreign language required. Mr. Moore.

English translations of Ariosto, Machiavelli, Cellini, Castiglione, Tasso, Manzoni, and others. Lectures, readings, and reports will be in English.

***611. Dante's Life and Works.** Three credit hours. Autumn Quarter. Three lectures each week. Alternates biennially with Italian 607. Prerequisite, Italian 602 or the permission of the instructor. Mr. Moore.

Reading of the Vita Nuova and The Inferno, Cantos 1-16.

***612. Dante's Life and Works (Continued).** Three credit hours. Winter Quarter. Three lectures each week. Alternates biennially with Italian 608. Prerequisite, Italian 611. Mr. Moore.

Reading of The Inferno, Cantos 17-34, Purgatorio and Paradiso.

SPANISH

400. Review Spanish. No credit. Autumn Quarter. Five recitations each week. Sections in this course are limited to twenty students. To this course are assigned students unable to maintain themselves in Spanish 403.

401. Elementary Spanish. Five credit hours. One Quarter. Autumn, Winter, Spring. Five recitations each week. Sections in this course are limited to thirty-five students. All instructors.

The elements of Spanish grammar with abundant oral and written exercises. Especial attention to ear training and oral practice. A practical phonetics laboratory is at the disposal of the students.

No student may take this course simultaneously with French 401-402 or Italian 401-402.

402. Elementary Spanish (Continued). Five credit hours. One Quarter. Autumn, Winter, Spring. Five recitations each week. Sections in this course are limited to thirty-five students. All instructors.

The elements of Spanish grammar with abundant oral and written exercises.

* Not given in 1928-1929.

Especial attention to active vocabulary. Elementary reading based on Spanish geography, history, customs, and manners. A practical phonetics laboratory is at the disposal of the students.

No student may take this course simultaneously with French 401-402 or Italian 401-402.

403. Intermediate Spanish. Five credit hours. One Quarter. Autumn, Winter, Spring. Five recitations each week. Prerequisite, Spanish 402 or an equivalent. Sections in this course are limited to thirty-five students. All instructors.

404. Intermediate Spanish (Continued). Five credit hours. One Quarter. Autumn, Winter, Spring. Five recitations each week. Prerequisite, Spanish 403 or an equivalent. Sections in this course are limited to thirty-five students. All instructors.

405. Commercial Correspondence. Five credit hours. Winter Quarter. Five recitations each week. Prerequisite, Spanish 404. Mr. Gutierrez.

406. Customs and Manners of Spain. Three credit hours. Spring Quarter. Three recitations each week. Prerequisite, Spanish 405. Mr. Gutierrez.

413. Advanced Spanish. Five credit hours. One Quarter. Autumn, Winter, Spring. Five recitations each week. Prerequisite, Spanish 404 with grade not lower than "C." Mr. Gutierrez.

Rapid reading of modern novels and plays, with emphasis on the early period of the nineteenth century.

This course is not open to students who have credit for Spanish 603.

414. Advanced Spanish. Five credit hours. One Quarter. Autumn, Winter, Spring. Five recitations each week. Prerequisite, Spanish 413. Mr. Gutierrez.

Rapid reading of novels and plays.

This course is not open to students who have credit for Spanish 604.

FOR ADVANCED UNDERGRADUATES AND GRADUATES

Students intending to major in Spanish are urged to elect the following courses outside of the department: English 805, History 435, and Philosophy 601-602.

According to the University regulations, courses in this group are not open to Freshmen and Sophomores.

605. Advanced Composition and Conversation. Three credit hours. Autumn Quarter. Three recitations each week. Prerequisite, Spanish 405 and 406 or an equivalent. Mr. Gutierrez.

This course, conducted wholly in Spanish, is designed especially for prospective teachers and for persons desiring a practical command of the language. The subject matter will be, in large part, the geography and history of Spain and Spanish-America.

606. Advanced Composition and Conversation (Continued). Three credit hours. Winter Quarter. Three recitations each week. Prerequisite, Spanish 605. Mr. Gutierrez.

This course, conducted wholly in Spanish, is designed especially for prospective teachers and for persons desiring a practical command of the language. The subject matter will be, in large part, the geography and history of Spain and Spanish-America.

***607. The Modern Spanish Novel.** Five credit hours. Autumn Quarter. Five recitations each week. Given biennially, alternating with Spanish 609-610. Prerequisite, Spanish 413-414. Mr. Hendrix.

A careful study of the development of the modern Spanish novel, reading of representative authors. Lectures, collateral reading, and reports.

***608. The Modern Spanish Novel (Continued).** Five credit hours. Winter Quarter. Five recitations each week. Given biennially, alternating with Spanish 609-610. Prerequisite, Spanish 413-414. Mr. Hendrix.

A careful study of the development of the modern Spanish novel, reading of representative authors. Lectures, collateral reading, and reports.

609. Romantic Drama and Poetry of the Nineteenth Century. Five credit hours. Winter Quarter. Five recitations each week. Given biennially, alternating with Spanish 607-608. Prerequisite, Spanish 413-414. Mr. Hendrix.

A survey of the movements in Spanish drama and poetry during the first half of the nineteenth century. Lectures, collateral reading, and reports.

610. Modern Spanish Drama. Five credit hours. Spring Quarter. Five recitations each week. Given biennially, alternating with Spanish 607-608. Prerequisite, Spanish 413-414. Mr. Hendrix.

A survey of the movements in Spanish drama and poetry during the second half of the nineteenth century. Lectures, collateral reading, and reports.

***611. Drama of the Golden Age.** Five credit hours. Autumn Quarter. Five recitations each week. Given biennially, alternating with Spanish 613-614. Prerequisite, Spanish 413-414. Mr. Anibal.

An intensive study of a limited number of plays of the representative dramatists. Lectures, collateral reading, and reports.

***612. Drama of the Golden Age (Continued).** Five credit hours. Winter Quarter. Five recitations each week. Given biennially, alternating with Spanish 613-614. Prerequisite, Spanish 413-414. Mr. Anibal.

An intensive study of a limited number of plays of the representative dramatists. Lectures, collateral reading, and reports.

614. Cervantes. Five credit hours. Autumn Quarter. Five recitations each week. Given biennially, alternating with Spanish 611-612. Prerequisite, Spanish 413-414. Mr. Anibal.

A study of the works of Cervantes with special emphasis on the Quixote. Lectures, collateral reading, discussion, and reports.

613. Prose of the Golden Age. Five credit hours. Winter Quarter. Five recitations each week. Given biennially, alternating with Spanish 611-612. Prerequisite, Spanish 413-414. Mr. Anibal.

A study of the prose of the period with especial emphasis on the novel. Lectures, collateral reading, discussion, and reports.

615. Survey of Spanish Literature from the Earliest Times to the Seventeenth Century. Five credit hours. Winter Quarter. Five recitations each week. Prerequisite, Spanish 413-414. Mr. Anibal.

Lectures, collateral reading, and reports.

* Not given in 1928-1929.

616. Survey of Spanish Literature of the Seventeenth and Eighteenth Centuries. Five credit hours. Spring Quarter. Five recitations each week. Prerequisite, Spanish 413-414.

Lectures, collateral reading, and reports.

617. Advanced Syntax. Three credit hours. Autumn Quarter. Three recitations each week. Prerequisite, Spanish 413-414 and the consent of the instructor. Miss Porter.

Study of syntax.

***619. Sound: Laboratory Phonetics.** Five credit hours. Autumn Quarter. Five recitations each week. Prerequisite, Junior standing. Mr. Russell.

Study and analysis of sound in its physiological aspects. Training in the observation, recording, and analysis of speech and in the correction of speech defects.

***620. Spanish Phonetics.** Five credit hours. Winter Quarter. Five recitations each week. Prerequisite, Spanish 413-414. Mr. Russell.

Careful and detailed study of special problems involved in teaching Spanish to English-speaking students. Laboratory analysis of differences between English and Spanish pronunciation.

621. Foreign Brogue. Three to five credit hours. One Quarter. Autumn, Winter, Spring. Prerequisites, satisfactory courses in the field of the problem and permission of the instructor. Lecture, laboratory, and library work. Mr. G. O. Russell.

A study of the defects involved and the methods of correction. Laboratory work to that end. A course designed especially for the foreign students on the campus looking to a correction of their phonetic defects of speech; and also for those interested in a study of the means of such correction and the usage of the phonetic laboratory equipment involved, especially Americanization teachers. Given biennially alternating with Spanish 620.

622. Historical Phonetics. Five credit hours. Spring Quarter. Lecture, library and laboratory work. Mr. G. O. Russell.

A consideration of the historical attempts at an experimental analysis of the scientific problems involved in human speech. The laboratory work will be dedicated to duplication by each student of the most basic of those experiments. This course is designed as a preliminary to all courses in phonetics, philology, teaching of language, psychology of language, telephone and radio communication, speech pathology, etc. Given biennially, alternating with Spanish 619.

625. The Spanish Ballad. Five credit hours. Spring Quarter. Five recitations each week. Prerequisite, Spanish 413-414. Mr. Hendrix.

A study of the origins and the development of the Spanish Ballad. Lectures, collateral reading, discussion, and reports.

700. Minor Research: Human Speech. Three to five credit hours. One Quarter. Autumn, Winter, Spring. Conference, library and laboratory work. Prerequisites, satisfactory courses in the field of the problem undertaken. A student may repeat this course and spend such time as the problem calls for during the Quarter. The amount of time spent and the quality of work done governs the credit. Mr. G. O. Russell.

This course is designed to permit any properly qualified person to avail himself of the library and laboratory facilities of the university for carrying out a minor or preliminary investigation or for adding to his knowledge and technique in any phase of the

* Not given in 1928-1929.

study of human speech, and sound as related thereto, or the mechanism involved in its production, or its known defects and their correction.

705-706-707. Honors Course in Spanish. Three to five credit hours. Autumn, Winter, Spring Quarters. Work in conference, library, or phonetics laboratory. Prerequisites, Senior standing, with a record of "A" in at least half of the Spanish courses and an average of "B" in the remainder, and the approval of the department.

This course is intended to give undergraduates of special aptitude a greater opportunity to do independent study than is possible in the ordinary course.

NOTE: TEACHING COURSES. For the Teaching Course in this department see the Department of Principles of Education, Course 745.

ROMANCE LANGUAGES

FOR GRADUATES

An undergraduate student shall not be permitted to take any course in the "800" group except by permission of the Graduate Council.

- 801. Introduction to Old French.
- 802. Introduction to Old French (Continued).
- *803. Old Provençal.
- *804. Old Provençal (Continued).
- 805. Old Spanish.
- 806. Old Spanish (Continued).
- *807. The French Romantic Novel.
- *808. French Romantic Drama.
- 809. Research in French Language and Literature.
- 810. Research in Spanish Language and Literature.
- 811. Seminary in French Literature.
- 812. Seminary in French Literature (Continued).
- 813. Old French Literature.
- 815. Seminary in Spanish Literature.
- 817. Seminary in French Literature.
- 820. Phonetic Research: Major Problems.

For description of graduate courses in this department see the Bulletin of the Graduate School.

RURAL ECONOMICS

Office, 113 Townshend Hall

PROFESSOR FALCONER, ASSISTANT PROFESSORS LIVELY, McBRIDE
AND FOSTER

401. Agricultural Economics. Five credit hours. One Quarter. Autumn and Spring. Five lectures each week. Required of all students in the standard course in Agriculture. Prerequisite, Economics 405; or concurrent, Economics 402. Mr. McBride, Mr. Foster.

The economics of agriculture, the economics of the production and marketing of farm products, the state and the farmer, the relations of agriculture to other industries, and the social relations of agricultural communities are considered.

* Not given in 1928-1929.

405. Sociology of Farm Folk. Five credit hours. One Quarter. Winter and Spring. Five lectures each week. Mr. Lively.

An introduction to rural sociology dealing with the organization, evolution, and current problems of rural society. Present rural social conditions and factors involved in rural social betterment.

FOR ADVANCED UNDERGRADUATES AND GRADUATES

According to the University regulations, courses in this group are not open to Freshmen and Sophomores.

606. Sociology of Farm Folk. Five credit hours. Autumn Quarter. Prerequisite, Sociology 401 or its equivalent. Not open to students who have credit for Rural Economics 405. Mr. Lively.

A more comprehensive course than Rural Economics 405, designed to meet the needs of students who have had an acceptable course in sociology.

607. Rural Social Organization. Three credit hours. One Quarter. Autumn and Spring. Prerequisite, Rural Economics 405 or 606 or permission of the instructor. Mr. Lively.

The need of rural organization; the conditions and units of successful rural organization, including a study of rural group life; the family, neighborhood, and community; the agencies and methods of rural organization including a survey of existing organizations, their scope and aims, characteristics of successful leadership, its source and training; forces which favor and retard rural organization. Readings, lectures, discussions, and investigations.

SCHOOL ADMINISTRATION

Office, 210 Education Building

PROFESSORS LEWIS, McCracken and Eikenberry, ASSISTANT PROFESSORS REEDER AND HECK, AND DEPARTMENT ASSISTANTS

FOR ADVANCED UNDERGRADUATES AND GRADUATES

According to the University regulations, courses in this group are not open to Freshmen and Sophomores.

600. Fundamentals in School Administration. Three credit hours. One Quarter. Autumn, Winter, Spring. Three lectures each week. Assigned readings. Required of all students in the College of Education. Prerequisite, Junior standing and for graduate credit, one year of experience. Mr. Lewis, Mr. McCracken, Mr. Eikenberry, Mr. Reeder.

Treatment of those fundamental problems in school administration which affect the teacher's welfare. Designed as a basic course for students intending to major in school administration and to give teachers a clearer understanding of the problems confronting the school administrator and of the teacher's part in solving them. Ohio school laws, regulations and decisions.

This course is not open to students who have credit for School Administration 401, 402, 403, or 404.

601. Child Accounting. Three credit hours. One Quarter. Autumn, Winter, Spring. Three lectures each week. Assigned readings, investigations, and reports. Required of all students in the College of Education. Prerequisite, School Administration 600 and for graduate credit, one year of experience. Mr. Heck, Mr. Anderson.

Compulsory education laws and working certificates of Ohio; main requirements in other states. Census—information it should secure, its use, legal requirements in different states. Attendance—organization of departments, amount and causes of non-

attendance, devices to improve attendance. School record systems—forms used, items recorded, and uses. Reporting systems. Need of uniformity in recording and reporting systems. Age-grade-progress studies. Elimination, grading, and promotion. Classification. Definition of terminology. Visiting teacher. Marking systems.

605. Personnel Administration in Education. Three credit hours. Winter Quarter. Three lectures each week. Assigned readings and reports. Open to Seniors and graduate students with permission of the instructor in charge. Prerequisite, School Administration 600 and for graduate credit, one year of experience. Mr. Lewis.

A study of personnel problems that arise in the management of the supervisory and teaching staff of a public school system with special attention to methods of selection, appointment, in-service preparation, assignment, rating, teacher's load, marital condition, promotion, absenteeism, contracts, certification, dismissal, ethics, pensions, tenure turnover, salary schedules, etc.

607. School Finance. Three credit hours. Winter Quarter. Three lectures each week. Assigned readings, investigations, and reports. Open to Seniors and graduate students with permission of the instructor in charge. Prerequisite, School Administration 600 and for graduate credit, one year of experience. Mr. Reeder.

The literature and sources of data; trends of school costs; outlook for future costs; possible school economies; school expenditures vs. ability to expend; sources of school revenues; meeting a financial stringency; the equalization of educational opportunity; the control of school funds; school indebtedness.

608. Business Management of Schools. Three credit hours. Spring Quarter. Three lectures each week. Assigned readings, investigations, and reports. Open to Seniors and graduate students with permission of the instructor in charge. Prerequisite, School Administration 600 and for graduate credit, one year of experience. Mr. Reeder.

Function of business administration in the schools; administrative relationships; personnel of the business department; making the budget; procuring revenue; financial accounting; planning and constructing a building; architectural service; selecting and purchasing building sites; financing capital outlays; use of buildings; maintenance of the plant; the janitor; insurance of property; taking the inventory; school supplies; pay roll procedure; school transportation.

609. Administration of Extra-curricular Activities. Three credit hours. Winter Quarter. Three lectures each week. Assigned readings, investigations, and reports. Prerequisite, School Administration 600 and for graduate credit, one year of experience. Mr. Eikenberry.

A study of those activities which fall outside of the group for which academic credit is ordinarily given. The relation of school administration to non-school community activities. Responsibility of the principal and superintendent for the school as a community center.

610. The Administration of Non-Urban Education. Three credit hours. Autumn Quarter. Three lectures each week. Assigned readings, investigations, and reports. Prerequisite, School Administration 600 and for graduate credit, one year of experience. Mr. McCracken.

An analysis of the problems of county and village superintendents; factors underlying rural school administrative problems; comparison of rural administrative problems in Ohio with those in other states.

618. Minor Research Problems. Two to four credit hours. Autumn, Winter, Spring Quarters. Prerequisite, Senior standing. Ad-

mission only on permission of the instructor and the chairman of the department. All instructors.

Investigation of minor problems in the various fields of school administration. A written report on the assigned problem will be required.

By permission of the Head of the Department and the Director of the Bureau of Educational Research, students enrolled in this course may obtain credit for research work done under the auspices of the Bureau staff.

621-622-623. Proseminary (Teachers in Service). Two credit hours. Autumn, Winter, Spring Quarters. Two lectures each week. Assigned readings and reports. Open to superintendents, principals, and teachers in service by permission of the instructor in charge. Prerequisite, School Administration 600 and for graduate credit, one year of experience. Mr. Lewis, Mr. Heck, Mr. Reeder.

Topics for study will be determined by the group within certain limits set by the department.

624. Administration of Standard Tests in Elementary Schools. Three credit hours. Autumn Quarter. Three lectures each week. Assigned readings and reports. Open to Seniors and graduate students of experience with permission of the instructor in charge. Prerequisites, School Administration 600 and 643 and for graduate credit, one year of experience. Mr. Lewis.

Selection of tests and organization of testing program for elementary schools; administrative problems involved in different types of schools and school systems; publicity and reports; use of data in formulating and evaluating administrative policies; remedial programs; the organization and work of bureaus of educational research.

This course is not open to students who have credit for School Administration 615.

625. Administration of Standard Tests in Secondary Schools. Three credit hours. Winter Quarter. Three lectures each week. Assigned readings and reports. Open to Seniors and graduate students of experience with permission of the instructor in charge. Prerequisites, School Administration 600 and 643 and for graduate credit, one year of experience. Mr. Heck.

Selection of tests and organization of testing program for secondary schools; the use of mental and educational tests in classification, diagnosis, prognosis, and educational guidance; adaptations of organization, curricula and method to the educational needs of pupils of junior and senior high school age; recent investigations through the use of tests in the field of secondary education.

This course is not open to students who have credit for School Administration 615.

626. Administration of Health Education. Three credit hours. Spring Quarter. Three lectures each week. Assigned readings, investigations and reports. Prerequisite, School Administration 600 and for graduate credit, one year of experience. Mr. McCracken.

The place of health administration in school administration. Medical inspection; school nurse, dentist, and home visitor. Relation of school authorities to public health education. Hygiene of instruction; health of the teacher.

This course is not open to students who have credit for School Administration 602.

627. Administration of Vocational Education. Three credit hours. Autumn Quarter. Three lectures each week. Assigned readings, investi-

gations and reports. Open to Seniors and graduate students with permission of instructor in charge. Prerequisite, School Administration 600 and for graduate credit, one year of experience. Mr. Stone.

The administrative problems of vocational education, viewed from the angle of public school officials. Relation of vocational education to other types of education; national, state, and local organization and support of different types of vocational education; cooperative agreements and relationships; guidance and placement problems; types of curricula; costs; qualifications of instructors.

628. Administrative Problems of the Elementary School Principal. Three credit hours. Winter Quarter. Three lectures each week. Assigned readings and reports. Prerequisite, one year of experience and six hours of school administration. Open on permission of the instructor in charge. Mr. Lewis.

An analysis of the work of the elementary school principal. The principal's relation to: the community, parents, pupils, building custodian, teachers, superintendent, supervisors, and other officials of the central office. Different types of elementary schools—e.g., platoon, duplicate, departmentalized, three-track system, graded mental levels. Qualifications necessary for effective leadership. Office routine, business management supervision.

629. Administrative Problems of the Urban Secondary School Principal. Three credit hours. Autumn Quarter. Three lectures each week. Assigned readings and reports. Prerequisite, one year of experience and six hours of school administration. Open on permission of the instructor in charge. Mr. Eikenberry.

A study of the special administrative problems of the urban high school including staff organization, teacher's loads, the schedule of recitations, school records and reports, routine administration, health and safety administration, examinations, marks and promotions, school library, educational and vocational guidance and disciplinary control.

Not open to students who have credit for School Administration 650.

631. Organization of the Junior High School. Three credit hours. Winter Quarter. Three lectures each week. Assigned readings and reports. Prerequisite, one year of experience and six hours of school administration. Open upon permission of the instructor in charge. Mr. Lewis.

A functional analysis of the work of the junior high school principal. Adaptation to school organization needed for attaining the objectives of the junior high school. The problems involved in junior high school organization in city schools and county school systems.

636. School Publicity. Two credit hours. Winter Quarter. Two lectures each week. Assigned readings, investigations and reports. Open to superintendents, principals, and graduate students of experience by permission of the instructor in charge. Prerequisite, six hours of school administration and for graduate credit, one year of experience. Mr. Holy.

A study of both continuous and campaign publicity for schools through use of contests, exhibits, printed reports, newspapers, etc.; organization of publicity; means of securing support; the checking of results.

637. Administration of Special Education. Three credit hours. Spring Quarter. Three lectures each week. Assigned readings and reports. Open to Seniors and graduate students with permission of the

instructor in charge. Prerequisites, School Administration 600 and 601 and for graduate credit, one year of experience. Mr. Heck.

History and development of special schools and classes; types defined; place in education; state encouragement and regulations; types of control; internal government; buildings and rooms; equipment; costs; teachers-training, experience, salaries; selection of other employees; characteristics of children; principles governing admittance, retention, and withdrawal; curriculum—academic, industrial, extra-curricular; methods of follow-up, etc.

640. Administration of the Curriculum in the Elementary School. Two credit hours. Winter Quarter. Assigned readings, investigations, and reports. Open to Seniors and graduate students with permission of the instructor in charge. Prerequisite, School Administration 600 and for graduate credit, one year of experience. Mr. Ashbaugh.

An examination of the experimental evidence bearing upon the administrative problems concerned with the curriculum of the first six grades. Placement of subject matter in the elementary grades; program making for different types of schools; problems involved; regular and special subjects. Standards for selection of textbooks; administration of free textbooks.

This course is not open to students who have credit for School Administration 604.

642. Administration of the Curriculum in the Secondary School. Three credit hours. Winter Quarter. Assigned readings, investigations, and reports. Open to Seniors and graduate students with permission of the instructor in charge. Prerequisite, School Administration 600 and for graduate credit, one year of experience. Mr. Eikenberry.

A treatment of the same topics as in School Administration 640 but with application to the upper six grades.

This course is not open to students who have credit for School Administration 604.

643. Educational Statistics: Elementary. Three credit hours. Autumn Quarter. Two lectures and one two-hour laboratory period each week. Mr. Heck.

A basic statistical course for students intending to conduct major or minor research. Frequency distributions; methods of measuring central tendencies and variability; construction of graphs and charts; interpretation of results in terms of probability; simple treatment of correlation.

This course is not open to students who have credit for Psychology 608 or School Administration 613.

NOTE: Students desiring to study statistics in the Autumn or Winter Quarter will elect Psychology 608 or 612.

†644. Educational Statistics: Intermediate. Three credit hours. Two lectures and one two-hour laboratory period each week. Prerequisite, Psychology 608 or School Administration 613 or 643, or equivalent. Mr. Buckingham.

Fuller treatment of correlation; regression coefficients and equations; partial and multiple correlation; uses of normal probability curve; reliability and validity of test data; comparable measures.

This course is not open to students who have credit for Psychology 612.

NOTE: Students desiring to study statistics in the Autumn or Winter Quarter will elect Psychology 608 or 612.

† Not given during the academic year, 1928-1929.

†645. **Administration of School Libraries.** Two credit hours. Four lectures each week. Assigned readings and reports. Open to Seniors and graduate students with permission of the instructor in charge. Prerequisite, School Administration 600 and for graduate credit, one year of experience. Miss Voegelien.

Designed to meet the needs of school librarians and general administrative school officers. Principal topics: history and development of the school library; its place in educational systems; standards and state regulations; rooms, equipment, and budgets; selection, acquisition, and care of books; publicity and cooperation with other agencies; instruction in the use of books; relation of librarian to teachers and school officials.

647. **Planning and Construction of School Buildings.** Three credit hours. Autumn Quarter. Three lectures each week. Assigned readings, observation trips, and reports. Open to Seniors and graduate students with permission of the instructor in charge. Prerequisite, School Administration 600 and for graduate credit, one year of experience. Mr. McCracken.

A study of types of buildings, choice of site, construction and suitability for educational needs. The use of score cards for rating buildings—rural, village, and city. Standards for maintenance, repairs, and janitorial service. Methods of studying efficiency of various types of service systems.

This course is not open to students who have credit for School Administration 606.

648. **Equipment of School Buildings.** Two credit hours. Spring Quarter. Two lectures each week. Assigned readings, observation trips, and reports. Open to Seniors and graduate students with permission of the instructor in charge. Prerequisite, School Administration 600 and for graduate credit, one year of experience. Mr. McCracken.

A study of present-day equipment for school buildings. Layouts for special and regular rooms; fixed and movable furniture. Methods of determining choice in relation to quality, use, and cost.

†650. **Administrative Problems of the Non-Urban Secondary School Principal.** Three credit hours. Six lectures each week. Prerequisite, School Administration 600. Mr. McCracken.

An analysis of the work of the secondary school principal in non-urban districts. The principal's relation to community, parents, pupils, building custodian, teachers, superintendent and other officials.

A study of the special administrative problems peculiar to non-urban secondary schools, together with the problem of organizing and administering village and rural high school districts and schools, including the program of studies, the schedule of recitations, records and reports, health and safety administration, school library, examinations, marks and promotions, educational and vocational guidance, disciplinary control, extra-curricular activities, supervision, tests and measurements. This course is particularly designed for beginning superintendents and principals whose first field of endeavor will be the administration of small high schools.

Not open to students taking School Administration 629.

†655. **Administration of Dalton Laboratory Plan.** Two credit hours. Four lectures each week. Assigned readings and reports. Open upon permission of the instructor in charge. Miss Helen Parkhurst.

A special course designed to orient administrators and teachers with respect to education on the Dalton Plan. Deals with its inception and development, its application in

† Not given during the academic year 1928-1929.

America and foreign countries. A detailed description of the modifications necessary in the administration of schools in order to individualize and at the same time socialize learning. Designed to meet the needs of superintendents, principals and teachers interested in adopting the Dalton Plan or some modification of it.

†657. Administration of Platoon Schools. Two credit hours. Four lectures each week. Assigned readings and reports. Open on permission of the instructor and the chairman of the department. Mr. Glenn.

The development of the Gary Platoon, or Work-Study-Play Plan. Together with a detailed description of its organization, making of programs, training and assignment of teachers, advantages and disadvantages, building modifications, costs, etc. Designed to meet the needs of a rapidly growing number of superintendents, principals and teachers who have adopted or are thinking of adopting a platoon program.

FOR GRADUATES

An undergraduate student shall not be permitted to take any course in the "800" group except by permission of the Graduate Council.

800. The Preparation of Theses and Other Scientific Papers.

801. Administration of Colleges, Universities and Teacher Training Institutions.

802. Seminary in School Administration.

803. Ad Interim Projects.

805-806-807. Major Research Problems.

*810. Social Foundations of Public School Administration.

*811. State Administration of Education.

*812. Administration of National Systems of Education.

†815. Seminary in County School Administration.

†816. Seminary in School Finance and Business Management.

*830. Administrative Problems of the City Superintendent.

†835. Administration of Experimental Education.

†840. Administration of the Junior College.

For description of graduate courses in this department see the Bulletin of the Graduate School.

SCIENCE NURSING

(See Public Health)

SHOPWORK

(See Industrial Engineering)

SOCIOLOGY

Office, 115 Commerce Building

PROFESSORS HAGERTY, NORTH, LUMLEY, MARK, AND MILLER, ASSISTANT PROFESSOR JONES, MR. DENUNE, MISS SPAETH, MR. MASON, MR. PATERSON, AND DEPARTMENT ASSISTANTS

401-402. Principles of Sociology. Five credit hours. Two Quarters. Both 401 and 402 are given Autumn, Winter, Spring. Not open to Freshmen. Mr. North, Mr. Lumley, instructors and assistants.

A study of the fundamental ideas and principles of sociology. Syllabus, assigned reading, lectures, discussions, reports.

* Not given in 1928-1929.

† Not given during the academic year, 1928-1929.

411. Introduction to Anthropology. Five credit hours. Autumn Quarter. Textbooks, lectures, papers, and discussions. Not open to Freshmen. Miss Spaeth.

The field of anthropology; origin and antiquity of man, his essential characteristics, relation to the animal kingdom; the criteria of race distinction, the several races and some anthropological problems.

412. Social Anthropology. Five credit hours. Winter Quarter. Textbooks, lectures, papers, and discussions. Not open to Freshmen. Prerequisite, Sociology 411. Miss Spaeth.

A study and analysis of types of social organization of primitive man, such as the clan, family, political organization, religion, etc.

FOR ADVANCED UNDERGRADUATES AND GRADUATES

According to the University regulations, courses in this group are not open to Freshmen and Sophomores.

601. The Family. Four credit hours. One Quarter. Winter and Spring. Prerequisite, Sociology 401-402. Miss Spaeth.

A survey of types of family organization from primitive times to the present, and an analysis of the factors that entered into their development. The modern family and an analysis of modern family problems.

605. The Immigrant. Four credit hours. Winter Quarter. Prerequisite, Sociology 401-402 or 410. Mr. Miller.

A study through the various immigrant groups of social attitudes resulting from political, religious, economic and social relations of groups. The psychological and practical problems of adjustment. General principles of group relationship rather than specific methods of procedure.

607. The Race Problem. Four credit hours. Autumn Quarter. Prerequisite, Sociology 401-402 or 410. Mr. Miller.

Survey of contemporary and potential race contacts and conflicts throughout the world. Development of race consciousness. Relations of Caucasians, Negroes, Indians, and Mongolians in the United States.

621. The Community and the Child. Three credit hours. One Quarter. Autumn and Spring. Prerequisite, Sociology 401. Open only to students in Home Economics who do not have credit for Sociology 601 or 617. Students from other departments admitted only on consultation with the instructor. Miss Spaeth.

The family as a social institution, its historical development and present status. Modern conditions affecting home life. The child as affected by economic and social factors outside the home. The dependent and the neglected child. Social legislation affecting the child. Social responsibility toward the child.

This course is open only to students in Home Economics who do not have credit for Sociology 601 or 617.

625. The Criminal. Three credit hours. Spring Quarter. Prerequisite, Sociology 401-402. Mr. Hagerty.

The social, economic, and physiological causes of crime. The changing character of crime as modified by the legal code. Types of criminals, the instinctive, habitual, professional, etc. The classical and positive schools of criminology. The relation of feeble-mindedness and degeneracy to crime. Juvenile crime, its causes and prevention.

645. Leisure and Recreation. Four credit hours. Autumn Quarter. Prerequisite, Sociology 401-402. Mr. Mason.

The sources of leisure in early and modern society. The social significance and uses of leisure. The social functions of play. Historical aspects of play. The recreation problems of modern communities from the standpoint of control and of public provision.

646. Social Organization and Administration of Recreation Facilities. Four credit hours. Winter Quarter. Prerequisite, Sociology 645. Mr. Mason.

Methods and means of control of commercialized recreation with special reference to American cities and towns. The promotion and organization of public and semi-public agencies. The administrative control of playgrounds, social centers, clubs, and other non-commercialized agencies. The coordination of the recreation facilities of the community.

656. Rural Social Institutions. Four credit hours. Autumn Quarter. Prerequisite, Sociology 401-402. Mr. Denune.

The problems of health, recreation, social intercourse, housing, child welfare, dependency, defectiveness, and delinquency in American rural communities and small towns. The agencies and organizations dealing with these problems.

657. Welfare Problems in Rural Communities. Four credit hours. Winter Quarter. Prerequisite, Sociology 656 or Rural Economics 606. Mr. Denune.

The relation of the school, the church, the Christian Associations, recreational societies, relief agencies, and the Juvenile Court to welfare problems in rural communities and small towns. A consideration of recreation, social intercourse, health, child welfare, dependency, defectiveness, and delinquency. This course is designed to give to rural teachers, ministers, and social workers a knowledge of the welfare problems which exist in rural communities and the methods by which they are being approached by rural workers.

665. Social Order and Social Control. Three credit hours. Autumn Quarter. Textbooks, lectures, papers, and discussions. Prerequisite, Sociology 401-402 or 410. Mr. Lumley.

The social order, its nature, its varieties, its origin; the agencies of social control, such as custom, conventionality, social suggestion, public opinion, law, education, religion, art, ceremony, ideals, personality. Additional readings for graduate credit.

FOR GRADUATES

An undergraduate student shall not be permitted to take any course in the "800" group except by permission of the Graduate Council.

801-802-803. History of Sociological Thought.

805-806-807. American Sociological Theory.

809-810. Research in Social Control.

811-812. Modern Social Welfare Movements.

815. The Community.

816. Community Surveys.

817-818-819. Research in the Field of Human Migrations.

821-822-823. Graduate Seminary.

824-825-826. Research in the History and Organization of Social Welfare Activities.

827. Nationality and Nationalism.

828. Social Classes.

829. Social Changes through Crisis.

831-832-833. Administration of Social Agencies.

841-842-843. Research in Social Statistics.

845-846. Methods of Sociological Investigation.

847-848-849. Research in Penology.

850-851-852. Research in Rural Social Institutions.

For description of graduate courses in this department see the Bulletin of the Graduate School.

SPANISH

(See Romance Languages and Literatures)

EDUCATION SURVEY COURSES

401. Introductory Survey in Education. One credit hour. Autumn Quarter. Required of all Freshmen in the College of Education. Not open to Sophomores, Juniors, or Seniors except by permission. The Dean.

Adaptations and new adjustments to University conditions of learning. Academic orientation. A survey of guiding principles and laws in economical learning. The relation of the teaching profession to other educational agencies and their bearing on social effectiveness.

FOR ADVANCED UNDERGRADUATES AND GRADUATES

According to the University regulations, courses in this group are not open to Freshmen and Sophomores.

605. Foundation of Contemporary Civilization. Five credit hours. Autumn or Winter Quarter. Five meetings each week. Mr. Leighton.

This course is required of all students majoring in subjects falling within the fields of biological and inorganic sciences, including mathematics and psychology. It is elective to other students and may be taken in the second Quarter of the Junior year. It is designed to afford the mature student some insight into the progress of thought in a great province of life to which he has given relatively little attention during his course. The course deals with the changes of thought in religion, ethics, social and political philosophy in relation to the general intellectual and social changes of modern civilization. It concludes with a brief discussion of the chief problems of our present civilization.

608. Development of Modern Science. Five credit hours. Autumn or Winter Quarter. Five meetings each week. Fourth year. Mr. Henderson.

This course is designed especially for students who have not majored in science. Its purpose is to give the non-science students a general view of the historical development of scientific ideas, and to dwell upon the nature and validity of scientific hypotheses and theories from a scientific point of view.

611. Science Methods and Ideals. Three credit hours. Spring Quarter. Three meetings each week. Prerequisite, Senior or graduate standing, and a major in science. Students well advanced in a science major at the end of the Junior year, or supervisors of science work will be eligible. Mr. Henderson.

This course is designed for students well advanced in science courses or with a definite interest and attainment in science. It aims at a review of the methods of science and the validity of scientific conclusions; the extension of the scientific method in the social order; and the preparation and responsibilities of scientific workers.

VOCATIONAL EDUCATION

Office, 212 Industrial Engineering Building

†**501. Survey of Commercial Education.** One credit hour. Required in the curriculum in Commercial Teacher Training.

Consideration of the fundamental purposes of commercial education in the light of its wider social significance.

502. Curricula for Trade and Industrial Courses. Three credit hours. Autumn Quarter.

Detailed analyses of trades now taught in the schools, for the purpose of determining content of courses and curricula. Examples of trades so analyzed are carpentry,

† Not given during the academic year, 1928-1929.

plumbing, tailoring, machine shop practice, patternmaking, and printing. Current vocational curricula critically studied in the light of these analyses.

504. Part-time (General Continuation) School Curricula. Two credit hours. Winter Quarter.

Determination of subject matter suitable for meeting the needs of general continuation school pupils. Development of teaching units from analysis, and classification of units for teaching purposes.

505. Methods of Teaching in Part-time (General Continuation) Schools. Two credit hours. Winter Quarter.

Detailed study of the teaching problems peculiar to continuation school work.

506. Introduction to Vocational Education. Three credit hours. Autumn Quarter.

This course aims to give the student an intelligent introduction to vocational industrial education. Definition of various types of industrial education; relation of vocational education to liberal education; past and present methods in vocational industrial education; prevailing theories regarding a solution of the industrial education problem.

This course is not open to students who have credit for Vocational Education 603.

507. Curricula for Commercial Courses. Three credit hours. Autumn Quarter. Required in the curriculum in Commercial Teacher Training.

Survey and analyses of different commercial occupations and determination of the educational needs of persons in such occupations. Study of types of commercial curricula. Formulation of model curricula.

510. Shop Problems. Three credit hours. Winter Quarter.

Critical study of vocational industrial shop problems in schools and industry.

511. Special Methods in Vocational Teaching. Three credit hours. Winter Quarter.

Methods of teaching industrial subjects in vocational schools. The application of basic teaching principles to the practical problems of classroom procedure.

This course is not open to students who have credit for Vocational Education 301 and 302 or 503.

***512. Special Methods in Vocational Teaching.** Two credit hours. Spring Quarter. Prerequisite, Vocational Education 503 or 511.

A continuation of Vocational Education 511.

FOR ADVANCED UNDERGRADUATES AND GRADUATES

According to the University regulations, courses in this group are not open to Freshmen and Sophomores.

602. Principles of Part-time Education. Two credit hours. Winter Quarter.

An introductory course consisting of a study of types of part-time education and the aims and purposes of each.

604. Bases of Vocational Education. Three credit hours. Winter Quarter. Three recitations each week.

Consideration of the vocational education movement with respect to the agencies that have played important parts in its development.

* Not given in 1928-1929.

†605. Principles of Commercial Education. Three credit hours. Three recitations each week.

For teachers or prospective teachers of commercial subjects in junior or senior high schools. Topics considered: meaning, purpose and scope of commercial education in secondary schools; importance of and procedure in making occupational surveys in the field of commercial education.

606. Principles of Vocational Guidance. Three credit hours. Spring Quarter.

An inquiry as to the origin, development, meaning, scope, purposes, and methods of vocational and educational guidance.

607. Vocational Counseling. Two credit hours. Winter Quarter. Two recitations each week. Prerequisite, Vocational Education 606.

A consideration of the supervisory and administrative problems connected with vocational guidance and placement. Counseling with pupils, parents and employers.

Survey of vocational guidance material and of the teacher's technique in the use of this material; educational, selective; trade and intelligence tests.

610. Organization and Management of Day Industrial Schools. Three credit hours. Spring Quarter. Three recitations each week. Prerequisite, Vocational Education 506.

Organization of courses of instruction; types of buildings; equipment; selection, training and supervision of instructors; costs; records and certification in relation to the day industrial school.

611. Organization and Management of Evening Industrial Schools. Two credit hours. Winter Quarter. Two recitations each week. Prerequisite, Vocational Education 506.

Organization of courses of instruction; types of buildings; equipment; selection, training and supervision of instructors as related to the evening industrial school.

612. Organization and Management of Part-time Schools. Two credit hours. Winter Quarter. Two recitations each week. Prerequisite, Vocational Education 506.

A study of the organization and management of general continuation schools and of part-time trade extension schools, both compulsory and cooperative.

620. Minor Problems. Two to four credit hours. Autumn, Winter, Spring Quarters. Prerequisite, Senior standing or special permission of the instructor.

Investigation of minor problems in vocational education and vocational guidance.

By permission of the Head of the Department and the Director of the Bureau of Educational Research, students enrolled in this course may obtain credit for research work done under the auspices of the Bureau staff.

COURSE OFFERED IN THE DEPARTMENT OF PRINCIPLES AND PRACTICE OF EDUCATION

485. Principles and Methods of Teaching Commercial Subjects. Three credit hours. Summer Quarter, first term. Lectures, readings, and recitations. Required in the curriculum in Commercial Teacher Training.

A study of the principles and methods of teaching as applied to standard commercial subjects.

† Not given during the academic year, 1928-1929.

FOR GRADUATES

An undergraduate student shall not be permitted to take any course in the "800" group except by permission of the Graduate Council.

801. Major Research.

805. Seminary in Vocational Education.

For description of graduate courses in this department see the Bulletin of the Graduate School.

ZOOLOGY AND ENTOMOLOGY

Office, 101 Botany and Zoology Building

PROFESSORS OSBURN, OSBORN (RESEARCH), BARROWS, KRECKER, AND DeLONG, ASSISTANT PROFESSORS KENNEDY AND KOSTIR, MR. D. F. MILLER, MR. PRICE, MR. J. N. MILLER, MR. DUNHAM, AND DEPARTMENT ASSISTANTS

ZOOLOGY

401-402. General Zoology. Five credit hours. Two Quarters. Both 401 and 402 are given Autumn, Winter, Spring. Three lectures and two two-hour laboratory periods each week. Students intending to specialize in entomology should take this course in the Autumn and Winter Quarters of the first year. Mr. Kreckler, Mr. Kostir, Mr. D. F. Miller, Mr. Price, Mr. J. N. Miller, and assistants.

A course intended to give the student a general view of the nature of animal life and to point out its relation to man's economic and social activities. The chief topics considered are as follows: nature and structure of living substance, food and its energy transformations, the essentials of reproduction; a review of the animal groups with special stress on useful and harmful qualities; animal distribution and relation to environment; heredity and evolution with particular stress upon their relation to human affairs.

403. General Principles of Heredity. Five credit hours. One Quarter. Autumn and Spring. Five lectures each week. Prerequisite, Zoology 401-402 or Botany 401-402 or equivalent. Mr. Barrows.

A study of heredity in animals and plants, to serve as an introduction to heredity, as a basis for advanced work in plant and animal breeding, and as an aid in the analysis of biological and sociological problems into which the question of heredity enters. The subject will be presented in lectures, illustrated with lantern slides and actual specimens. Exercises in the form of problems will be assigned. The different types of heredity studied will be chosen from the animal and plant material which best illustrates the subject. Hereditary characters found in man will be used to a large extent. The course will be made as simple and practical as the subject will permit. Present-day theories and technical applications will be left for discussion in the more advanced courses to which they properly belong.

407. Animal Microtechnic. Three credit hours. Spring Quarter. A laboratory course. Laboratory work, assigned readings, and conferences. This course is designed for students intending to major in one of the biological sciences or intending to teach in secondary schools. Prerequisites, Zoology 401-402 or equivalent, and permission of the instructor. Limited to twelve students. Mr. Kostir.

A course in the theory and practice of microscopic methods, including fixing, embedding, sectioning, and staining of animal tissues, making permanent preparations, and special manipulation of microscopic accessories.

***408. Ornithology.** Five credit hours. Spring Quarter. Two lectures and three two-hour periods of laboratory or field work each week. Prerequisite, two Quarters of biological science.

A study of the classification of birds, structure, food habits, nests, eggs, and migration, together with the identification of species from museum material and in the field.

409. Evolution. Five credit hours. One Quarter. Winter and Spring. Five lectures each week. Prerequisite, two Quarters of biological or geological science. Mr. Osburn.

The facts and theories of organic evolution. The general treatment is: historical aspects, evidences, factors, and the theories proposed from the time of Lamarck to the present.

FOR ADVANCED UNDERGRADUATES AND GRADUATES

According to the University regulations, courses in this group are not open to Freshmen and Sophomores.

604. Animal Ecology. Five credit hours. Spring Quarter. Two lectures and three two-hour periods of laboratory or field work each week. Prerequisite, Zoology 401-402 and two additional Quarters of a biological science. Mr. Kreckler.

An introduction to the study of animals in their natural surroundings which will include ponds, streams, fields, and woodlands. Animal associations and the various factors which affect animals in relation to their environment are considered.

This course is recommended to students who expect to teach biology. Students who desire to continue the subject may take up some particular phase of the work and should then register in Zoology 701.

615-616. Advanced Zoology of Invertebrates. Five credit hours. Autumn and Winter Quarters. Two lectures and three two-hour laboratory periods each week. Lectures, laboratory exercises and occasional field trips. Prerequisite, Zoology 401-402 and two additional Quarters of biological science. Mr. Kostir.

A study of the structure, life histories, habits, and relationships of invertebrate animals, together with the consideration of important biological principles. Especially recommended as a fundamental course for students specializing in biological science.

This course is not open to students who have credit for Zoology 405-406.

617. Cellular Biology. Five credit hours. Spring Quarter. Three lectures and two laboratory periods each week. Prerequisite, Zoology 401-402 or equivalent and at least two additional Quarters of biological science. Mr. Kostir.

A study of the organization of activities of the living cell. Special attention will be given to the results of the investigation of unicellular organisms.

***620. Evolution of the Animal Groups.** Five credit hours. Spring Quarter. Prerequisites, Zoology 409 and one Quarter of comparative anatomy or equivalent. Mr. Osburn.

The principles of evolution as applied to the origin and relationships of various animal groups with special emphasis on the advancement shown by the vertebrate classes from fishes to mammals.

NOTE: TEACHING COURSES. For the Teaching Course in this department see the Department of Principles of Education, Course 705.

* Not given in 1928-1929.

FOR GRADUATES

An undergraduate student shall not be permitted to take any course in the "800" group except by permission of the Graduate Council.

801-802-803. Seminary in Zoology.

805-806-807. Invertebrate Zoology.

808-809. Invertebrate Embryology.

811-812-813. Research Work.

For description of graduate courses in this department see the Bulletin of the Graduate School.

ENTOMOLOGY

451. Economic Entomology. Five credit hours. One Quarter. Autumn and Spring. Three lectures and two two-hour laboratory periods each week. Prerequisite, Zoology 401-402 or equivalent. Mr. DeLong and assistants.

The economic importance of insects, the basis for insect control, a survey of the important pests of farm, garden, orchard, forest, household, mill, storehouse and those that affect the health of man and domestic animals, with a discussion of their specific control.

Field observations of habits and damage, the recognition of many economic species and the preparation and application of remedial measures. Students are required to prepare a collection. Those desiring to collect specimens in advance should get printed instructions from the department.

452. Economic Entomology. Five credit hours. Winter Quarter. Three lectures and two two-hour laboratory periods each week. Prerequisite, Entomology 451. Mr. DeLong and assistants.

A general and systematic treatment of insects, mites, and ticks, with special attention to destructive beneficial forms.

FOR GRADUATES

An undergraduate student shall not be permitted to take any course in the "800" group except by permission of the Graduate Council.

801-802-803. Seminary in Entomology.

811-812-813. Research Work.

814-815-816. Biological Control of Insects.

For description of graduate courses in this department see the Bulletin of the Graduate School.